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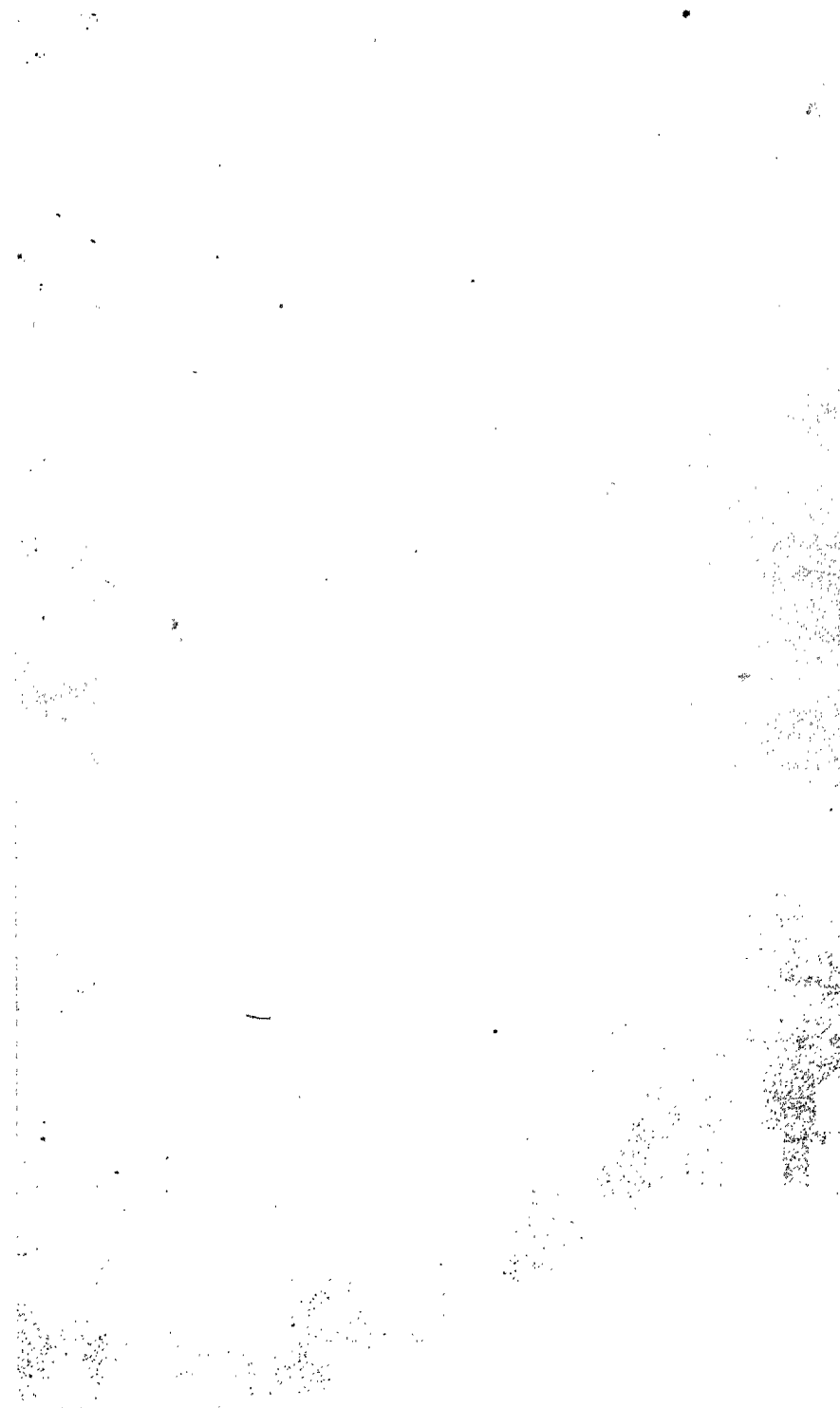
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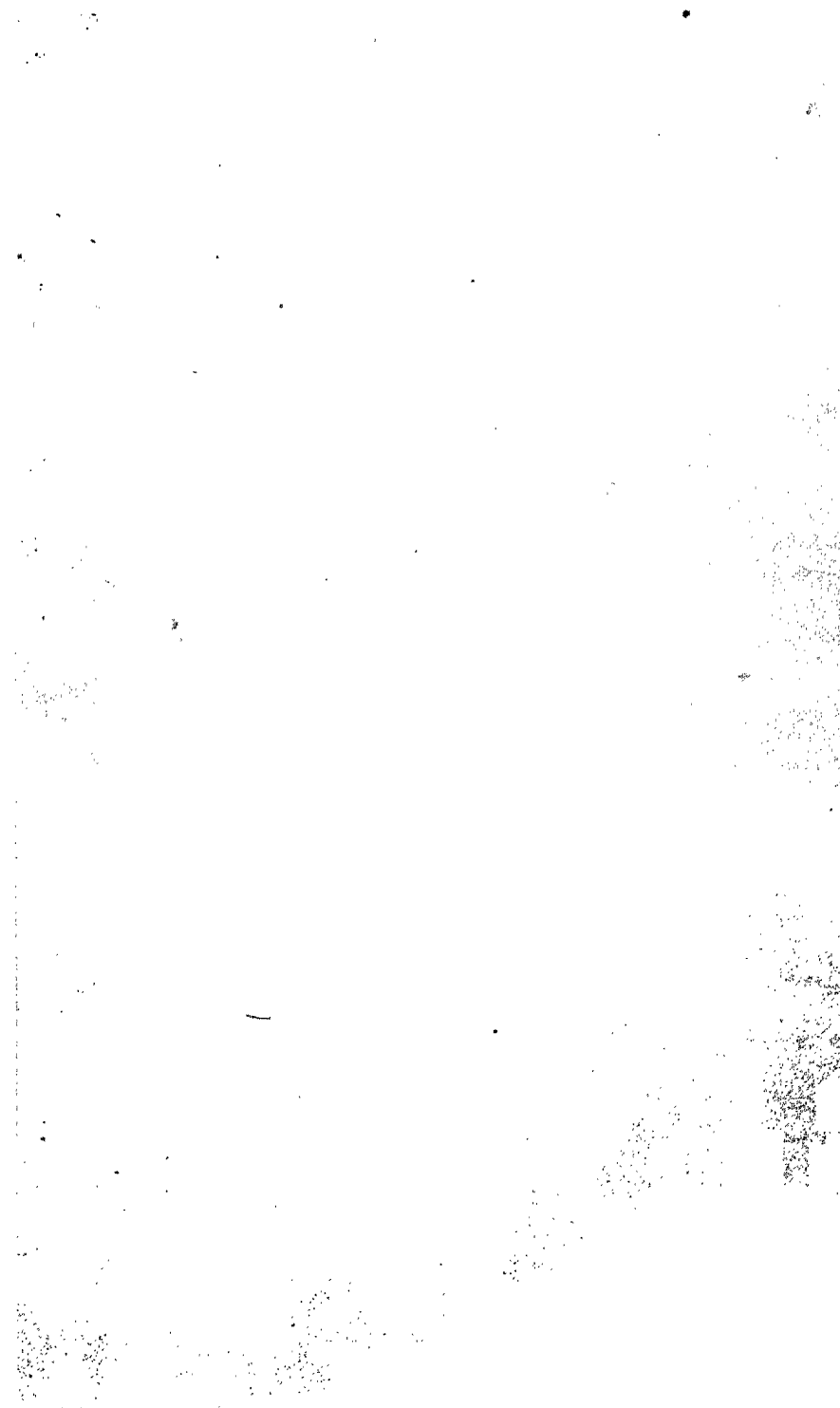
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Vol. IV. } MARCH & JUNE, 1924. { Nos. 1 & 2.

I. ASSAM AND THE PACIFIC.

31368 By

J. H. HUTTON, C. I. E.

The theory of the migration of peoples and cultures from India to the Pacific is so well known that one might reasonably expect to find pagan and non-Hindu tribes in India having something in common with the Islanders of the South Seas, but a perusal of the MS. of Mr. J. P. Mills' forthcoming work on the Ao Naga tribe, has led me to the view that there is far more in common between the Naga tribes of Assam and the Islanders of the Pacific than has hitherto been suspected, and it is to indicate the lines of that resemblance that this paper is written.

In one respect there is an accidental resemblance which makes comparison very difficult, and that is the fact that the Pacific peoples are scattered among different islands, and have the consequent variations in culture, while the Naga tribes, although occupying contiguous land areas, have also, owing to generations of inter-tribal warfare, migrations and erratic amalgamations, become

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possessed of cultures which are very distinct to the detailed observer. The result is that when one tries to compare them with the Polynesian or with the Melanesian islanders, one finds one point of resemblance to one tribe here, another to a different tribe there, and any attempt to connect the two has to be established by the total sum of a vast number of resemblances each in itself isolated and capable of being taken as a mere coincidence. Thus, we have the institution of a special form of tabu known to some Nagas as *peima*¹ or *pini*² appearing also in Hawaii³, as well as something very like it in New Guinea⁴, while both in the Naga Hills and the Marquesas Islands⁵ a bunch of leaves is used as the sign of tabu. Further, we have the same word-root with more or less the same sense from the Naga Hills to New Zealand,—Angami Naga *penna*, Sema Naga *pini* (=a tabu in which the village is closed and the inhabitants do not go out to work) linking up with the Maori word *punipuni*; thus:—Malaya *buni*, = 'concealment', 'hiding'; Samoan *punipuni*, = 'to shut', 'to close'; Tahitian *puni*, = 'to be enclosed', *punipuni*, = 'to hide oneself'; Hawaiian *puni*, = 'to surround, to be hemmed in'; Tongan *buni*, = 'closed', 'shut', *tapbuni*, = 'to close up', 'to shut', 'tabu', 'prohibition'; Manganian *puni*, = 'hide'; Paumotan *punipuni* = 'refuge'⁶. But this continuity of resemblance is perhaps exceptional.

¹The Angami Nagas, p. 192. ²The Sema Nagas, p. 220.
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The moon is regarded as masculine both by Nagas and Fijians⁷, the Sun being feminine; the use of posts of vitality is common both to Nagas and to Maoris;⁸ the system of inflicting punishment by a quasi-ceremonial plundering and destruction of an offender's property is practised by the Angami Nagas as by the Samoans,⁹ and by the Maoris under the name of *muru*.¹⁰ To take another instance, the use of ginger and peppermint as disinfectants against spirits is common to all Naga tribes and to the natives of New Guinea¹¹ and the New Hebrides.¹² The practice of head-hunting is another obvious point in common, and in New Guinea again we find the successful raiders dividing the skull¹³ as is done by several Naga tribes.¹⁴ A discursive list of this sort, however, might be continued indefinitely, and I therefore propose to restrict myself to two subjects only, (1) the use of stone, and (2) practices and beliefs in connection with death.

Among all Naga tribes, whether they use stone for other purposes or not, we find a very strong belief in the virtue that resides in the small baetylic stones, usually nodules more or less oval in shape, of a heavy black stone, which when rubbed with the hand shows a wetish mark. Each stone has its particular virtue in promoting wealth in grain, success in hunting,

⁷Frazer, *op. cit.*, I, 67. ⁸*ibid.*, II, 15. ⁹*ibid.*, 160. ¹⁰*Old New Zealand* by Pakeha Maori, ch. vi. ¹¹Frazer, *op. cit.*, I, 222, 300. ¹²*ibid.*, 370. ¹³*ibid.*, 323. ¹⁴*The Angami Nagas*, 383, pl. B, and *MAN*, Aug. 1922.

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etc., and they are very highly prized, kept usually in a secret place and from time to time anointed with pig's fat.¹⁵ Some of them are definitely regarded as resembling the male genital organ, and I recently saw several of this description at Karami in shape not unlike the manufactured stone phalli reported from Australia and depicted in MAN in October 1921,¹⁶ a type which is apparently connected with Melanesia, since it is also found made in baked clay. In Melanesia itself such baetyls are in use at any rate in the Banks Islands and the New Hebrides,¹⁷ and their powers and uses clearly bear great similarity to those of the baetyls used in the Naga Hills. "Some of these", says Dr. Codrington, "are inherited from ancient times, and some are new; some are good in fighting; some will produce food". Similar beliefs exist in regard to stones in the Torres Straits, in Samoa, in Timor,¹⁸ and among the Karens of Burma,¹⁹ a people whom I shall have occasion to mention again. The *oha* stones of the Lhota Nagas,²⁰ which are of a similar nature but communal as distinct from private possession, have pretty close relatives again in Melanesia²¹ and in certain stones worshipped by the Polynesians of Samoa,²² while there was till recently a stone in the Sema

¹⁵ *The Angami Nagas*, 408; *The Sema Nagas*, 253 sq., 321. ¹⁶ Vol. XXI, no. 10, pl. K. ¹⁷ Codrington, *The Melanesians*, 140 sq., 183 sq.; Frazer, *Folk-Lore in the Old Testament*, II, 62. ¹⁸ *ibid.*, 63 sq. ¹⁹ *ibid.*, 66. ²⁰ Mills, *The Lhota Nagas*, 166 sqq. ²¹ Codrington, *op. cit.*, 119. ²² Frazer, *op. cit.*, II, 63, 64.

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country²³ approached through a medium acquainted with its spirit exactly as in the case of other stones in the Banks Islands described by Codrington.²⁴ In addition to this cult of baetylic stones, we find described a practice of throwing stones upon a heap by the way side,²⁵ another practice not unknown to the Semas.²⁶

Turning to the Polynesians, we find here again that their use of stone has close parallels in the Naga Hills. A number of authors have described the stone erections of the Pacific, the *ahu* of Easter Island, the *tahua* of the Marquesas, and the *marae* of other islands in Polynesia. These stone buildings must have a very close resemblance to the *dahu* and the *tehuba* of the Angami Nagas. The *dahu* is a rectangular pyramidical erection of stone rising in tiers from the ground, and affords a vantage ground for the clan to which it belongs in case of a riot with another clan, an occurrence by no means infrequent. The *tehuba* is a great stone platform, able to accommodate a hundred persons or more and usually circular, with a level top enclosed with stone seats round the edge and sometimes partially paved with stone; here the village or clan assembles for religious dances at certain festivals in the year. Both contain graves of ancestors.

²³ V. *The Angami Nagas*, 407 sq., *The Sema Nagas*, 254 sq. This stone turned out to be a fraud. A Christian evangelist broke the stone in 1923. As it was obvious, when it broke, that it was not a baetyl at all, but merely common shale well oiled, the "interpreter" of the stone was afraid to put in a complaint to me, which otherwise he would most certainly have done. ²⁴ *op. cit.*, 140. ²⁵ Codrington, *op. cit.*, 185. ²⁶ *The Sema Nagas*, 256.

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revered as of extreme sanctity, the violation of which brings misfortune on the whole of their posterity. Similar stone platforms are also built on a smaller scale by private individuals for the glorification of themselves or their dead; these, when circular, are called *kwehu*, when rectangular *bāzē*, and are sometimes cenotaphs, sometimes tombs (*mekru*). Even so the *ahu* of Easter Island seem to have been forts, while the Marquesans use their *tahua* for sacred dances,²⁷ and for a game played on stilts in which the combatants try to balance on one stilt and trip up their opponents with the other,²⁸ a game played in just the same way by the Angamis, though I do not know of any other Nagas who use stilts. To give one more parallel, I will mention that there are at Gwilong in the Manipur State, and in other Nzemi villages, small pyramidical cairns in alignments, which are usually associated with water (as also are the *bāzē* built by the Nzemi in memory of their dead), and which may be compared with the pyramidical cairns in the Marianne Islands and elsewhere.²⁹ All these Naga stone erections are intimately connected with the dead, as are the *marae* of the Pacific,³⁰ which must, in some cases at any rate, very closely indeed resemble the *bāzē* and the *tehuba* of the Angamis. I might add that

²⁷ Frazer, *Belief in Immortality*, II, 340 sq., of: *The Angamis Nagas*, 48 and plate facing p. 49. ²⁸ Frazer, *op. cit.*, II, 339 sq.

²⁹ St. Johnston, *Islanders of the Pacific*, 228, 229, 234, 238. ³⁰ Frazer, *op. cit.*, II, 282 sq. 418.

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though an attempt has been made to connect the megalithic work of the South Seas with the worship of the Sun, Sir James Frazer finds "nothing of any value to connect the monuments with Sun-worship but a good deal to connect them with the worship of the dead".³¹ This is equally the case with the monuments of the Naga Hills, which have nothing to do with Sun-worship at all.

The use of stone has brought us naturally to the subject of the Dead. Here points of similarity are lacking, but they are accompanied by a striking absence of uniformity both among the South Sea Islanders and among the Naga tribes. Some islanders bury, like the Angami or Sema Nagas, in boarded graves, and light a fire on the grave,³² or stick up the spears of the dead man upon it,³³ as the Lhota Nagas do; some³⁴ smoke-dry their dead, as many Nagas do, and some, like the Ao, Konyak and other Naga tribes, expose their dead on platforms close to the dwelling-houses of the living,³⁵ a practice which seems to have been followed by some of the Kshatriya clans of ancient India.³⁶ In New Guinea and Hawaii the dead are buried inside the houses,³⁷ as by the Yimtaung Nagas, or near them as by other Naga tribes, while in Tahiti³⁸ and in the Marquesas³⁹ the corpse was kept for a long time in the house, as it is by

³¹ Personal letter, also *op. cit.*, I, 438. ³² *ibid.*, 396. ³³ *ibid.*, II, 111. ³⁴ *ibid.*, I, 813, 855. ³⁵ Codrington, *op. cit.*, 255. ³⁶ Law, *Kshatriya Clans in Buddhist India*, 81. ³⁷ Frazer, *op. cit.*, I, 234, II, 418. ³⁸ *ibid.*, 309. ³⁹ *ibid.*, 357.

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the Kalyo-Kengyu Nagas, and is or was by the Maori,⁴⁰ the Marquesans⁴¹ and the Hawaiians.⁴² The corpses of the dead, thus preserved, were produced at an annual festival and broken up together, the bones being separated from the flesh, this again being a Kalyo-Kengyu practice.⁴³ The separate disposal of the head, always practised by Konyak Naga tribes, is found among the Maoris, Tahitians, Samoans, Marquesans⁴⁴ and in Papua,⁴⁵ while in New Britain⁴⁶ we actually find the head ultimately detached and painted as by the Konyak Nagas of Kongan, Namsang and a few other villages. So too rocks and cliffs are particularly popular both in the Pacific⁴⁷ and in the Naga Hills as the site of the second burial, whether of the body or of the head only.

Before death we find sickness caused by the soul of the dead parent drawing away that of the living child as among the Aos,⁴⁸ and in San Christoval the spirits struggle for the soul of a sick person,⁴⁹ a contest described to me by a Mami Angami of the Manipur State. The moment of dying is made hideous to the Sema as to the Maori by bawling into the dying man's ears to exhort him not to go,⁵⁰ and the soul of the

⁴⁰*ibid.*, 22. ⁴¹*ibid.*, 362. ⁴²*ibid.*, 427. ⁴³*V. The Lhota Nagas*, XXV.

⁴⁴Frazer, *op. cit.*, II, 23, 118 n., 128, 212, 357. ⁴⁵*ibid.*, I, 318.

⁴⁶*ibid.*, 398. ⁴⁷*ibid.*, 330; also *id.* II, 21, 22, 286, 311, 312, 321, 357; also *Old New Zealand*, Glossary, s. v. *Torere*.

⁴⁸Codrington, *op. cit.*, 209; Mills, MS. on the Aos. ⁴⁹Frazer, *op. cit.*, I, 382. ⁵⁰*Old New Zealand*, ch. XIV, and Glossary s. v. *Kia kotahi ki te ao!*; *The Sema Nagas*, 209.

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Marquesan escapes like a Naga's through his mouth and his nose.⁵¹ Death in Samoa is followed by a challenge to the spirits that caused it⁵² in almost the identical words used by the Angāmi, while something very similar is reported from New Guinea,⁵³ where, as in the Naga Hills, the death is announced by drumming.⁵⁴ The departed soul, whether Naga or Melanesian, then has to start on the perilous Path of the Dead⁵⁵ and run the gauntlet of the guardian demon, who destroys alike the unmarried Fijian⁵⁶ and unmarried Ao, and outside whose door there grows a tree, at which the Ao warrior must throw a spear,⁵⁷ the Fijian a shark's tooth.⁵⁸ The next world is entered through a cave,⁵⁹ on their way to which the ghosts may be recognized, as they flit past, by relations still unaware of the fact of death.⁶⁰ With the Polynesian, some souls go up to heaven while others go under ground, as with the Angamis.⁶¹ The future world is as this, and as men are here so they will continue there.⁶² One curious point of similarity arises in that in Bulotu, the future world of the Tongans (as also of the Fijians),⁶³ the air is so strong that mortals who reach there grow old and die in a few days,⁶⁴ just like the air of Whedzu-ra in Angami legend "where the air is very strong

⁵¹Frazer, *op. cit.*, II, 352; *The Sema Nagas*, loc. cit.; Frazer, *op. cit.*, I, 396. ⁵²*ibid.* II, 208; *The Angami Nagas*, 227. ⁵³Frazer, *op. cit.*, I, 272. ⁵⁴*ibid.*, 235. ⁵⁵*ibid.*, 326, 350, 464, 465. ⁵⁶*ibid.*, 464; Mills, unpubd. MS. on Aos. ⁵⁷*ibid.* ⁵⁸Frazer *op. cit.*, I, 463. ⁵⁹*ibid.*, II, 27, 31, 238. ⁶⁰*ibid.*, I, 292; Mills, *The Lhota Nagas*, 118. ⁶¹Frazer, *op. cit.*, II, 29; *The Angami Nagas*, 184. ⁶²Frazer, *op. cit.*, II, 30, 89, 238; Brown, *Melanesians and Polynesians*, 195; *The Sema Nagas*, 212. ⁶³Frazer, *op. cit.*, I, 462 sq. ⁶⁴*ibid.*, II, 88.

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and so people get old very quickly".⁶⁵ Sema Nagas believe that mortals in this life can communicate with their dead relatives, and put their belief into practice with the aid of ventriloquial mediums, just as the Marquesans do and the Maoris.⁶⁶ And throughout the Naga Hills, as in New Guinea, in the Celebes and in Samoa, the spirits of the dead promote the fertility of the soil.⁶⁷ At the same time we get the alternative conception of the soul, also familiar in the Naga Hills, as being reborn in an insect *en route* for ultimate extinction.⁶⁸ In spite of these conceptions of the soul as leaving this earth entirely or as undergoing transmigration into an insect body, the soul is regarded both in the Naga Hills and in the Pacific as needing to have houses built for it,⁶⁹ or wooden statues representing its former body, which it can inhabit after death, so that in both areas we may perhaps regard the treatment of the souls of the dead as empirical. However that may be, such statues are made by many Naga tribes, as in new Guinea,⁷⁰ in Santa Cruz,⁷¹ in the Society Islands⁷² and in Tonga.⁷³ It is perhaps worth noticing that in some cases these statues are made with extra long noses of a conventional type,⁷⁴ a fashion which I observed the other day in the

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Angami village of Tofima, where all the statues had noses of an absurd length. In the case of the New Guinea effigies the parallel is extremely close, for we find there that the skull of the deceased is inserted in a hole at the top of the effigy;⁷⁵ and while in the effigies made by the Konyak Naga villages of Ukha, Yaktu and Yonghong the skull is inserted between two horn-like projections made on the top of the wooden head to hold the skull, in the basket effigies of the Konyak Naga village of Tabu the skull actually takes the place of the head as it does in New Guinea. Finally I would draw attention to the use of canoe coffins for the dead, placed under a covering of thatch, by Lhotas, many Konyaks and other Naga tribes as by the Karens of Burma,⁷⁶ the Marquesans,⁷⁷ the Samoans⁷⁸ and the Maoris.⁷⁹ Can it be pure coincidence that the Maori and the Angami should refer to death in almost identical words?

"It is well with thee, O Moon. Thou returnest
from death.

But the dead of this world return no more".⁸⁰

"The moon waneth, yet he waxeth again,
But if a man die, he riseth no more".

I have said enough, I think, to show the cultural connection between the Naga Hills and the Pacific, but a point remains for consideration.

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The Naga tribes are noted for their taste for ornaments of shells,—conch shells and cowrie shells in particular; I have indicated that they associate their megalithic structures with water; that many of them use canoes for coffins. I should add that many also use what Peal describes as canoe drums,⁸¹ and that in the hills which they inhabit there is no nautical use to which canoes can be put. The canoe drum is an instrument of music only found elsewhere, as far as I know, among the Wa of Burma,⁸² in Malay and Borneo,⁸³ Melanesia,⁸⁴ Fiji,⁸⁵ and in a miniature form in South America,⁸⁶ whither, I may add, the toy blow-gun of the Thado Kukis of the Naga Hills also extends by way of the Philippine Islands.⁸⁷ Now all these points seem to connect the Naga with the sea, and indeed there is a very strong tradition in the Naga Hills of immigration from the south-east, though it is clear, of course, that there have been migrations from other directions as well. The Karens claim kinship with the Angami,⁸⁸ and undoubtedly have much in common with Nagas. Among other things the Chang Naga has a story of a great water, which striking a rock then flows upwards, and this water is usually regarded as lying to the south. The Karen has what is obviously the

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same legend, though in a more coherent form, perhaps, and Col. McMahon has been at some pains to explain this legend as a tradition of a voyage eastwards across the Bay of Bengal from the mainland of southern India to that of south-east Burma.⁸⁹

If we accept Col. McMahon's conclusion, we may perhaps hold that the southern element in the Naga race is derived from a northward diversion from a stream of migration flowing south-east from India, but the evidence for this conclusion is slender, and I, for one, should feel justified in holding that the centre of dispersion is likely to have been further east, perhaps in the Indian archipelago itself. Indeed, I am not sure but that this view is not supported by the stories, common to all Naga and Kuki tribes, of a tremendous cataclysm in which the world was overwhelmed by fire followed by darkness and accompanied by a formidable tidal wave.⁹⁰ It rather suggests Wegner's and Kroeber's theories of the subsidence of the earth's surface, for the latter classifies the west coast of South America as a permanently unstable zone, and while the "Gondwana Land" of other geologists, which stretched from Brazil to Australia, the scattered islands of Polynesia being the still unsubmerged mountain tops of that great sunken continent, is held to have disappeared in the Mesozoic age, this may need some qualification in the light of Kroeber's theory. Possibly the new expedition to the Pacific may throw some fresh light on the subject. *

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II. ANTHROPOLOGICAL GEOGRAPHY.

(i) *The Value of Geographical Analysis.*

By F. J. RICHARDS, M. A., I. C. S.

India is behind-hand in the study of Geography, and it is not surprising that the vast mass of anthropological material gathered has not yet been examined carefully in the light of geographical facts. Even in Europe geographical analysis has only recently been applied to anthropological data, and the value of this method is not yet fully appreciated by anthropologists.

Geography is a useful criterion. It is pregnant with suggestions. There are several problems which cannot be solved without its aid.

Anthropological science is at present convulsed by a schism between those who hold that identity of custom is proof of identity of origin, and those who ascribe identity of custom to similarity of the conditions (physical, mental, social) under which such customs grew. It is the old feud between evolution and spontaneous generation, between heredity and environment. There is no doubt truth on both sides of the controversy, but it is fruitless to discuss the subject so long as geographical factors are ignored. The safest course is to regard two similar customs as of independent origin, i. e., as "convergent," unless and until evidence of common origin is forthcoming. And the most valuable evidence is, undoubtedly, that of geographical continuity. The problem thus resolves itself into one of distribu-

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tion. Unfortunately, with the ebb and flow of cultures, continuity is often destroyed. There are types of discontinuous distribution, however, which, with careful study, can be made to yield evidence of value. It is possible sometimes to discern whether a cultural movement has been centrifugal (as in the Hindu culture of Java, for instance) or whether discontinuous distribution is evidence of the local survival of an early culture that has been submerged by later cultural floods (e. g., the fact that a language akin to Melanesian is spoken by the *Mundās* of *Chōtā Nāgpur*). Sometimes it is possible to locate the centre of dispersion, while a discontinuous "peripheral" distribution is usually interpreted as due, like a coral atoll, to submergence, and, if submergence is proved, it usually follows that, as when a stone is thrown into a pool, the cultural ripple most distant from the centre is the earliest.

A study of distribution will often reveal the direction in which cultural influences have moved. India is peculiarly exposed to the impact of cultural currents, from across the mountains and from across the seas. Most currents carry some sediment, sometimes the sediment is deposited; sometimes it penetrates and alters the underlying strata, and some currents merely erode and destroy.

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By the study of stratified rocks and the action of air and water geologists have established the sequence of the evolution of animals and plants. A study of cultural strata and cultural

drifts should enable the anthropologist to unravel the tangled complex of human culture.

Cultural drift is not however the sole factor in moulding human society. The influence of environment is equally important. Its importance has, however, I think, been over-rated. Arm-chair philosophers are apt to give too free a rein to their fancies and have jumped to conclusions that will not bear the test of fact. The influence of environment undoubtedly modifies human culture, but it cannot create.

Great results have been achieved by zoologists and botanists in the regional study of the distribution of animals and plants. Their methods deserve the emulation of the student of human culture. Unfortunately it is our habit in India to work and think in terms of provinces, states and districts, the limits of which are determined solely by administrative or political convenience. Writers in Europe who have no local knowledge are misled by this. They speak vaguely of India south of the Vindhya as "South India", regardless of the distinction between the Deccan Plateau and the Eastern and Western Coastal plains. They speak loosely of "Madras" without discriminating the fundamentally different cultural areas of Malabar, the Andhradēsa and the Tamil country. They fail to appreciate the fact that "Mysore" is made up of more than one geographical area, and seem unaware that many districts, e. g., Coimbatore, Salem, N. Arcot, comprise bits of several diverse geographical units. They ignore

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the distinction between North and South Malabar, North and South Travancore, the Tulu country and West Coast Kannada.

Anyone with a first-hand knowledge of the castes and tribes of South India must realise the vital importance of exactitude as to locality in recording the results of investigations. Failure in this vitiates the value of a very high proportion of the anthropological material at our disposal. The term "*Nāyārs*", for instance, includes such a multitude of distinct communities that it is meaningless to speak of a "*Nāyār* custom" without noting not only the class of *Nāyār* but also the *nād* and even the villages to which that custom appertains. The term "*Vellālar*" is even vaguer. There is no such thing as a "*Vellālar*" custom; so distinct, for instance, are the Kongu *Vellālas* of Coimbatore from the Tondaimandalum *Vellālar*s of Chingleput, and each of these communities from the *Kāraikāttu* *Vellālar*s of Tinnevely that it would be difficult to justify the treatment of these three communities as members of one and the same social group, except only that they share a common name and are alike in economic and social status. Again *Kāpus* and *Kāmmas* spread from the Northern Circars and Hyderabad south-ward to Cape Comorin. How far those sections of these Telugu communities which have penetrated into the Tamil country have been influenced, if at all, by their Tamil environment can only be ascertained by a careful search for

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variations in custom in the different geographical areas in which they reside. The Discipline of Geography is, in short, the surest safeguard against confusion.

(ii) Geographical Factors.

A. The *Physical factors* which condition human existence may be roughly grouped under the three heads—(a) Configuration, (b) Climate and (c) Economic Products. These factors are closely interdependent one on the other, but no one of them taken singly can be used to demarcate areas of human culture. Land surface elevation, for instance, the “orographical map”, is of importance to the anthropologist, but the lowlands include desert and swamp as well as fat delta, and the uplands may be a sanitarium or a death trap. Rain in excess is as injurious to human subsistence as rainlessness, and man can thrive as thickly in the comparatively dry areas of Tanjore and South Travancore as on the wetter coast of Malabar. Iron ores are of little use if fuel and labour cannot be had to melt them. In short, physical factors taken collectively form a variety of complexes, some of which are favourable and some are deleterious to the development of human culture, and the complexes themselves may be profoundly modified by human art, particularly, in India, by the art of irrigation.

B. These complexes find their expression in the distribution of “human phenomena” e. g., (a) Density of population, (b) Race, (c) Language, (d) Religion, (e) Political and administrative divisions.

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A. The *Physical factors* which condition human existence may be roughly grouped under the three heads—(a) Configuration, (b) Climate and (c) Economic Products. These factors are closely interdependent one on the other, but no one of them taken singly can be used to demarcate areas of human culture. Land surface elevation, for instance, the “orographical map”, is of importance to the anthropologist, but the lowlands include desert and swamp as well as fat delta, and the uplands may be a sanitarium or a death trap. Rain in excess is as injurious to human subsistence as rainlessness, and man can thrive as thickly in the comparatively dry areas of Tanjore and South Travancore as on the wetter coast of Malabar. Iron ores are of little use if fuel and labour cannot be had to melt them. In short, physical factors taken collectively form a variety of complexes, some of which are favourable and some are deleterious to the development of human culture, and the complexes themselves may be profoundly modified by human art, particularly, in India, by the art of irrigation.

B. These complexes find their expression in the distribution of “human phenomena” e. g., (a) Density of population, (b) Race, (c) Language, (d) Religion, (e) Political and administrative divisions.

But the boundaries of these phenomena do not coincide. One race may speak several languages, one language may be spoken by several races; religion transcends the limits of race and language, and a state or nation may comprise many races, languages and religions.

Can a common multiple be found for all these variable factors, human and physical? I think it can,—in Density of Population.

(iii) Areas and Avenues.

A. BASIS FOR CLASSIFICATION.

Attention has in recent years been concentrated on routes,—routes of migration and routes of trade. But routes are but a means to an end and the end ultimately is, almost always, *food*. The continuance of the human race depends on breeding, and breeding is impossible without feeding. Civilisation, in its crudest forms, is the art of adjusting birth rate and food supply, of feeding the maximum number of people in any given area, of mitigating the pressure of population on the soil. This eternal problem is the mainspring of human migrations and human wars.

"Nothing succeeds like success". The best test of the suitability of an area for human habitation is the number of people per square mile that it actually supports. In other words, the relative Density of Population is the key to "human geography".

A word of caution is here needed. Density fluctuates from age to age. Areas once crowded become depopulated, empty areas get filled. For

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this there are definite causes, e. g., physical changes such as dessication, the silting of rivers or harbours, or the ravages of disease, or economic changes, such as the development of coal and iron industries, a gold boom, or political convulsions, such as the devastations of an Attila or a Tamerlane. Nevertheless two facts remain; (1) the areas of high density in any particular epoch are the areas best suited to the maintenance of human life in the cultural conditions prevailing in that area at that epoch, and (2) with few exceptions the present areas of maximum density have been areas of high density throughout History.¹

B. TYPES OF AREA. The first duty then of the student of human geography is to plot out areas of different density. The standards of high and low density must for obvious reasons vary in different regions; the standards of Baluchistan, for instance, would be meaningless if applied to Bengal. For South India the following standards will I think be suitable:

Low Density; 200 persons or less per square mile.

Medium Density; 200 to 500 persons per square mile.

High Density: 500 persons or more per square mile.

Maximum Density: 1,000 persons or more per square mile.

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In the light of the perspective thus gained it should be easy to examine the areas in detail, and classify them further according to (I) movement and (II) position.

(I) Of movement there are four types ;

- (1) movement inwards or *centripetal* ; areas of concentration ;
- (2) movement outwards or *centrifugal* ; areas of dispersion ;
- (3) movement across or *transitional* ;
- (4) absence of movement ; areas of stagnation or *isolation*.

(1) Areas of high density or concentration, are usually centripetal foci. Humanity moves from one to other of these foci or impinges on a focus from some area of relatively low density. It is the foci that determine the routes and not *vice versa*.

Culturally a centripetal area is of course complex. Its blood is blended with the blood of countless races. From the play of cultural currents it is never free. Its social and economic life, viewed as a whole, is rich and varied, and, in spite of tremendous class equalities, its component elements are closely knit together ; usually it evolves a literature of its own, and literature, as a language medium, is a powerful solvent of cultural barriers. Diversity is pervaded with a subtle unity of character and thought. Such is the type of London, Paris or Rome.

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Destroy the British Empire and Britain must starve. This does not convert a centripetal focus into a centrifugal one.

(2) The true centrifugal area, or area of dispersion, is a barren land which cannot feed its folk, but whose folk are sufficiently virile, numerous and aggressive to win their way in more favoured tracts. Of this type are North Germany, Central Asia, Arabia, Afghanistan.

(3) The boundaries of centripetal and centrifugal areas are not always sharply defined. Between one area and another there is usually a tract that partakes of the character of both areas or of neither. Frontiers are, in short, belts or zones, not lines. Sometimes, as between France and Spain, they are "abrupt" and fairly stable, sometimes as between Teuton and Slav, they are "indefinite" and perpetually oscillating. These belts or zones I class as "transitional". Through them lie the avenues along which race and culture migrate. Such areas are the nurseries of "Border Chieftains", who acknowledge the suzerainty of any power that is strong enough to assert it, and resume their independence at the first symptom of weakness, take toll from all who pass through their zone, fight each other and loot the villagers beyond their borders.

(4) Areas of *Isolation* are usually difficult of access, or unhealthy, or infertile, or otherwise unfavourable to human existence; or two or more of these factors may be combined. Some are mere "misery spots", which nobody wants and the wise man avoids. Others prosper in sturdy

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The population of an isolated area, unlike that of a centrifugal area, is not "aggressive" in character, but "recessive"; savage it may be (more usually it is timid) but it does not impose its culture on its neighbour.

Areas of isolation are usually mountainous and jungly. To the anthropologist such areas are the most interesting of all for they preserve relics of cultures that have elsewhere passed into oblivion. "The hills contain the ethnological sweepings of the plains".²

(II) Position is an important factor in determining the social and cultural features of an area. No hard and fast classification is here needed, but a few descriptive terms of definite connotation are useful.

"Central" needs no explanation. "Marginal" is also self-evident, the most typical example being the narrow coastal plain. "Terminal" connotes the familiar "Land's End" or Finisterre position.

Three other terms I propose to use.

- (i) Certain areas lie off the beaten tracks of migration, but are easily accessible and maintain contact with the cultural areas on which

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(iv) *Geography of South India.*

A. *Physical.* With the foregoing classification in mind, let us study a map of the Madras Presidency and the associated States.

The physical configuration is familiar. They comprise I. the Deccan Plateau, II. the Eastern and Western Ghats, III. the Eastern and Western Coastal Plains.

Three big rivers, the *Kistna*, the *Godavari* and the *Kaveri* rise in the Western Ghats and flow across the Plateau, to the East Coast. In the south eastern portion of the plateau, between the basins of the *Kistna* and the *Kaveri*, and taking their rise from Nandidrug, is another "trinity of rivers", the North *Pinakini* or *Penner*, the *Pālār* and the South *Pinākini* or *Ponnaiyār*.

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- II Agency.
- III East Coast North.
- IV Deccan.
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I have examined each of these divisions in detail, also the States of Mysore, Travancore and Cochin.

(I) The *West Coast* is a marginal area. The narrow Coastal plain, densely populated, is blocked in by a belt of low density, comprising the Western Ghats. This line is broken in two places, (1) at Palghat and (2) at Shencottah. Only in these two places is the line pierced by railways.

The area of high density is broken in 3 places by areas of medium density. It is conspicuously constricted at two other points viz, South Cochin and again south of the Tinnevelly Quilon Railway.

Along this strip north-to-south movement is not easy: rivers are numerous and torrential. The railway from Tellicherry to Mangalore is a recent extension; Travancore is provided for by a fairly complete system of canals from Cochin to Trivandrum.

This configuration is reflected in the history and geography of the tract. Political frontiers oscillate, but the oscillations are controlled by geographical factors, I tabulate the areas, numbering the high density sections and lettering

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A. Coondapur Taluk. Kanarese Bants. Overflow of cultural and racial influence from N. W. Mysore State (Shimoga Dt.) *via* the territory of the *Nayakas* of Bednur (*alias* Keladi *alias* Nagar). The Ghats here are partly broken by the Sharavarti river which plunges down the famous Gersoppa Falls. The Kanarese element is intrusive and has not made much impression.

(1) (a) Udipi (b) Mangalore Taluks, the stronghold of the Tulus, a matrilineal folk.

B. Kesaragod Taluk: the transitional area between the Tulus and the Malayālis proper, viz., the Nāyars. The approach to the sea of the sparsely populated taluk of Uppinangadi has no doubt helped to make this a frontier.

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D. Ernād and Walluvanād taluks, the Moplah zone. The Moplahs were the Zamorin's men. They are associated with the Zamorin's policy of trade with Arabia, which brought Vasco da Gama to Calicut.

(4) Ponnāni taluk; an intensely fertile tract with a density of over 1000. Palghat in the hinterland is the gate to the Tamil country and dominated by Tamil *Brāhmans*. Ethnographically Palghat contains strong Tamil elements; e. g. Tarakars and Kaikolars. But the immigrants have all to some extent assimilated Malayāli culture. Ponnāni is an area of transition, and owes its importance, in part at least, to the peculiar configuration of the Cochin State. The northern portion of Cochin supports a population of over 500 per square mile and, with South Walluvanad, forms an avenue of approach to the port of Cochin and its back water, which would be one of the finest harbours in the world, but for its bar and the S. W. monsoon. Cochin back water is the strongest "magnetic" centre on the West Coast south of Bombay, a centripetal focus *par excellence*. It has attracted Romans, Jews and Syrian Christians, Portugese, Dutch and British. The Shoranur-Ernakulam Railway is but one of many evidences of the deflection of movement, cultural, racial and eco-

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nomie, to the objective of Cochin backwater. The railway takes a short cut through broken country; the real route lay through Ponnâni taluk, and there is evidence of this deflection in the social ingredients of Ponnâni taluk itself.

E. To the *Nelliampati Hills* Cochin undoubtedly owes its survival as a sovereign state. For centuries Cochin groaned beneath the upper and nether millstones, the Zamorin and Travancore. But thanks to the Nelliampatis, Cochin can only be attacked from the north on a narrow front, and Trivandrum is too far distant to control it effectively.

5. In North Travancore, the culture of Kerala has full play. A strip of maximum density (over 1000 per square mile) runs almost without break along the seaboard from end to end. The *Ghâts* form an impenetrable shield except for the loop-hole of the Shencottah Pass, and even here the Tamil influence has not penetrated far, for Travancore holds territory to the eastward of the pass and density is relatively low.

F. Nedumangad, with a population of only 300 to the square mile marks the end of undiluted Malabar. Trivandrum is the southern limit of the "maximum density" sea-board. Nearly one-fifth of its people speak Tamil.

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II. *The Agency* is, thanks to malaria, one vast area of isolation. Geographically it is an annexe to the great mountain belt that separates the Indo-Gangetic plains from Peninsular India. To the transmission of cultural movement it is a barrier which cannot be crossed. True, there are racial and cultural movements within it and parts of it are loosely controlled by an immigrant aristocracy, but these can only be explained by a comprehensive study of the whole Vindhya belt, and such a study has yet to be made. Only in two taluks, Jeypur and the Northern Udayagiri does density rise beyond 150 per square mile. For my present purpose it may be regarded as a blank wall.

III. The East Coast, Northern Division (the Northern Circars) is a narrow coastal plain, not unlike the West Coast. On the north its extension in the coastal plain of Orissa gives access to Bengal. The Uriyas have penetrated into Ganjam, but the passage is constricted by the Chilka Lake. In the centre two large magnetic foci are created by the deltas of the Godavari

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and Kistna, between which lies the Colair Lake. The Kistna delta is accessible from the Deccan, as the histories of Badami, Warangal and Golkonda and the railway from Warangal to Bezwada and from Guntakkal to Guntur testify. The Colair Lake has to some extent, but very imperfectly, protected the Godavary Delta from aggression from this quarter.

On the south these deltas can be got at from two quarters by way of the narrow barren plain of Nellore, viz., (1) from Madras, and (2) from Cuddapah. But transit by these routes is not easy, the passage from Madras is constricted by the Pulicat Lake and spurs of the Chitoor hills, that from Cuddapah by the difficulties of the Badvel Pass. The Cholas forced their way northward, and the Kakatiyas southward, *via* Pulicut, but they could not hold their conquests. Krishna Raya of Vijyanagar only succeeded (*via* Cuddapah) by capturing Udayagiri, where the Badvel Pass debouches, and by protecting his flank from Warangal by the quadrilateral of forts Vinukonda, Kondapalli, Kodividu and Nuzvid.

On the whole the history of this Eastern Coastal Plain is not unlike that of the West Coast. Within the area political boundaries oscillate and sections of it bend to break up into petty principalities.

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burga, Golkonda, Warangal, Banavasi, Adoni, Kurnool and Cuddapah. On East and West alike its frontier is a belt of almost impassable mountains and jungles. To the south lies a large compact area carrying a moderately dense population, and this in turn is bounded on the south by a belt of low density, broken only at one point, south-east of Mysore. This belt, the Poligar Belt, is of enormous importance to the history and ethnography of South India, for it is the line along which the Plateau breaks away to the Plains, and it marks the frontier between the Tamils and the Telugu-Kanarese people. It is true that this frontier has frequently been overpassed, but, whoever crosses it, finds himself in a foreign and hostile country.

The fairly popular area within this belt is not homogeneous. The Western and larger portion lies within the basin of the Upper Kaveri. The eastern portion is an overlap area covering the head streams of the North and South *Pinakini* and the *Palar*. The significance of this distinction will be apparent when we come to examine—

V. and VI. The East Coast Central and Southern divisions.—These divisions are best taken together. They comprise the home land of the Tamils. They are three centripetal foci, areas of maximum density,—(1) Madras, (2) Kumbakonam and (3) Madura.

The first two are linked by an densely populated area of irregular shape. This area is made up of the basins of the Middle and Lower *Palar*

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in the north and the basin of the Lower Kaveri in the south. Between the two is the fertile basin of the Lower *Ponnaiyār* which enters the sea near Cuddalore. The *Ponnaiyār* area is linked with the Kaveri area by the basin of the Vellar, which flows into the sea at Porto Novo. The *Pālār* area is linked with the *Ponnaiyār* area, not by the Coast line, but by a fertile tract comprised in the taluks of Wandiwash and Gingee.

At the head of the *Kāveri* delta stands *Trichinopoly*, the principal seat of Chola power and throughout the ages of immense strategic importance. The *Pālār* enters the coastal plain at *Arcot*, not far from Conjeevaram, the capital of the *Pālār* Plain from time immemorial. The strategic centre of the middle *Pālār* is Vellor. It is obvious that to any army marching between the *Pālār* area and the lower *Kāveri* the possession of Gingee is vital.

Madura stands by itself. It is not linked up with any other area of high density. To this fact it owes its strength and importance. It is sheltered from aggression on the north and west and east by a belt of rough untempting country, the stronghold of the predatory Kallar, and beyond this to the east and south stretch the dreary plains of Ramnad, the home land of the warlike Maravars. Even the railway from Madras makes a big detour *via* Dindigul to get there.

Beyond *Madura* to the south lies the "terminal" area of Tinnevely; through the heart of which runs the densely populated valley of

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the Tambraparni, with Tuticorin still trading overseas, as Kayal did in the Middle Ages, and Korkai in the days of the early Cæsars.

Tinnevely is the handmaid, but never the master, of Madura. The two together formed the homeland of the *Pāṇḍyas*, as the Lower *Kāveri* did that of the Cholas, and the Lower *Pālār* (known to history as *Tondamandalam*) that of the Pallavars.

Two other areas remain. In the hinterland north of Salem is a sparsely populated area, the Taluk of Uttangarai. The paucity of population is due to the hill complex which culminates in the Shervaroys. These hills are more important than a density map would lead us to suppose. They stretch north-eastwards (South of the *Pālār*) right through to Vellore with outliers beyond. They spread southwards and eastwards into Trichinopoly and South Arcot. Westwards they trend, at lower elevations, right up to the Kaveri at the point where it pierces the Poligar Belt. Only at three points do these hills permit ⁴ of access to the coastal plain, viz., (1) through the Attur gap east of Salem to the headwater of the Vellar, (2) through the rough Chengam Pass (near where the *Ponnaiyār* breaks through) to *Tirukkoylūr* and Cuddalore, and (3) in the north-west corner, via *Tiruppattūr* to Vellore and the *Pālār* valley.

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The westward limit of this hill complex is the frontier between the basins of the Middle Kaveri and the Middle *Ponnaiyār*, the former the Kongu country of history, (the present district of Coimbatore and the southern half of Salem), the latter the *Bāramahāl* (North Salem).

These two areas, Kongu and the *Bāramahāl*, the basins of the Middle *Kāvēri* and Middle Pennaiyar, have an important bearing on migrations in South India. So also has the "entrenched" basin of the Middle Penner (North *Pinākini*). It is these that determine the three lines of approach to the Tamil country.

A. *Tondamandalam* is accessible with difficulty from the Northern Circars, as already described, *via* Nellore. It is easily accessible from the south. It is also accessible *via* the Middle Palar valley, and on this several routes impinge. The chief of them are, (i) the *Māmandūr* Pass through which the railway runs from Cuddapah to Madras, (ii) The *Dāmalcheruvu* Pass in the north west corner of Chittoor district, (iii) the *Mōgili* Pass from *Kōlār* to Chittoor (iv) the *Nayakanēri* Pass a little further south, which enters *Palar* valley north of *Āmbūr*. The valley can also, as already pointed out, be entered from the *Bāramahāl*, which, in turn, is fairly easily accessible from Bangalore, Mysore and Kolar.

B. *Cholamandalam* (the Kaveri Delta) is accessible easily from the north as already described; also from the west from Kongu. Access from the *Bāramahāl* (*via* Chengam) is difficult.

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C. *Pāṇḍimāṇḍalam* (the districts of Madura and Tinnevely) are accessible only with difficulty from *Cholamāṇḍalam*, but with comparative ease from the north-west corner, i. e., from Kongu. But Madura City is shielded by the hills that lie between it and Dindigul. On the other hand *Cholamāṇḍalam* bears a teeming population and, owing to the narrowness of the valley above Trichinopoly, it is well adapted for defence against aggression from the West. Hence a movement from Kongu is apt to be checked at Trichinopoly, and diverted *via* Dindigul into the western half of Tinnevely, missing out Madura.

Kongu itself was accessible from Mysore by three *ghāts* (i) *Gajjalhatti* (ii) *Hāsanūr* and (iii) *Kāveripuram*. During the nineteenth century all these three *ghāts*, which pass through very rough country, have gone out of use.

The practicable route between the *Bāramahāl* and Kongu was the *Toppūr* pass. An alternative also lay through *Perumbālai*. The *Manjavādi* Ghat (east of the Shevaroy's) is of recent origin. The Mallapuram Ghat is accessible only by rail.

The Mysore Basin, i. e., the Upper *Kavēri* in the south-west of Mysore State is fertile, extensive and self-contained. Also it is a "recessed" area, off the direct line of route from the Northern Deccan to the Tamil country. It is exposed to attack from the north, across the open and lightly populated area which "overlaps" the basins of the *Kavēri* and the *Tungabhadra* and its tributaries. Its natural outlet is an incentive to advance.

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There are thus three lines of approach to the Tamil country across the Deccan (1) *via* Cuddapah (2) *via* East Mysore (3) *via* West Mysore.

(1) The Cuddapah route makes for *Tondamandalam* via the Middle *Pālār* valley.

(2) The East Mysore route makes for *Tondamandalam* via the *Bāramahāl* and Middle *Pālār* valley, or directly into the latter, but it gives access also (but not easy access) to *Cholamandalam* *via* Cuddalore or Kongu.

(3) The West Mysore route leads *via* Kongu to the *Kāvēri* Delta or, in the alternative, to the *Pandīyan* country.

This diagnosis is borne out in a remarkable way by historical records and campaigns and by the distribution of certain communities. I note a few below :

I. Historical.

(1) The *Rāshtrakūṭas* (ninth and tenth centuries) left records in Bellary and Cuddapah, in the North West of Mysore (Shimoga and Chitaldrug) in Sira and Gubbi and in Bangalore, along the Middle *Pālār* valley, all over *Tondamandalam* and as far south as Cuddalore. They do not appear in Kongu or the *Bāramahāl* or the *Kāvēri* valley.

(2) The Hoysalas in the thirteenth century ruled all over Mysore, the *Bāramahāl*, Kongu and the upper Chola country (they do not appear in the coast taluks but in *Tondamandalam*); they are only mentioned in Vellore, Conjeevaram and Cheyyar.

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(3) Malik Kafur marched direct on Dwara-samudra (Halibid) and this route took him to Madura and Rameswaram.

(4) The Nāyaks of Madura in the seventeenth century directed their campaign against Mysore via Kongu, following the precedent of the Cholas at the beginning of the eleventh century. The Mysore Odeyars returned the compliment. They were still hovering round Trichinopoly in the days of Clive. Haidar Ali held the *Bāramahāl* Kongu and *Dindigul* till his death; but his operations in *Tondamandalam* and the Kaveri Delta and the intervening country were confined to raids.

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Examples could be multiplied indefinitely, but the subject deserves a monograph of its own. The main fact is that for geographical reasons the Kallar country, the greater part of Ramnad, and eastern Madura and South Tinnevely are exceptionally resistant to aggression.

III. Application.

In my account of the West Coast and the Tamil country I hope I have made clear the bearing of Geography on questions of History, Race and Language. To work out the subject in detail would keep a Syndicate busy for several decades.

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Till cultural areas are defined and their content known, it would be futile to analyse any particular culture complex into its component parts, to assign to each part its proper place in the scheme of social stratification or to discuss its origin. Equally futile would it be to dogmatise on the influence of environment on culture. The essence of nationhood is unity in diversity. The greater the diversity, the richer the national life; the deeper the unity, the healthier the national life. The unity of English culture was at one time (and wrongly) assumed to be fundamental; its diversity was not appreciated. Enquiry has proved that English culture is founded on diversity. To the superficial observer, Indian culture is a chaos of irreconcilable diversities.

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III. THE AO NAGAS.

By SURENDRA NATH MAJUMDAR, M. B.

I had an opportunity of coming in contact with the Aos, during my residence at Mokokchong where I was posted as Medical Officer in charge. Further, my residence at Kohima in the same capacity for two years gave me many opportunities of studying the habits and customs of other Naga tribes as well.

The habitat of the Ao Nagas begins from Lakhuni. The Nagas are divided into several tribes of which the Ao is one. The principal Naga tribes are (i) Ao, (ii) Angami, (iii) Sema, (iv) Lhota, (v) Rengma, (vi) Kacha, (vii) Kuki, (viii) Konyak, (ix) Memi (Thangkul or Manipuri) etc. The Nagas occupy the region covered by the Naga Hills, Manipur and the outskirts of Burma. These tribes have got separate languages and their manners and customs also are dissimilar.

Some evidence may be adduced of the fact that the present Naga Hills are the 'Nāga Desa' or 'Nāga Lōka' described in the Mahābhārata. Some people say that at Khanama there can be seen the ruins of the palace of the Nāga princess—Ulupi. Khanama is at a distance of eleven miles from Kohima. The tunnel between Manipur and Khanama is still in existence. Through this tunnel, as tradition has it, medicine was brought to restore life and consciousness to Arjuna who had swooned in his fight with his

III. THE AO NAGAS.

By SURENDRA NATH MAJUMDAR, M. B.

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son Babrubahan. Even now the Nagas at Khanama offer annual sacrifices at the entrance to this tunnel. The ancient kings of Manipur were enthroned in a house situated on the tunnel. The entrance of the tunnel is dark as a dismal cave, and no one dares go into it. There is a hill named Usha said to be named after the princess Ushā. The remains of Ushā's palace are still shewn on the Ukha hill. There is a survey outpost on the Ukha hill, from where helio operations are carried on to Tezpur, Gauhati and Sadiya. At the foot of the Survey camp there is a tank covered with shrubs and creepers, guarded, so they say, by a white tiger. Many Nagas are reported to have seen this tiger which does not cause harm to any one. The Nagas regard that spot as extremely holy and offer worship to the huge stone there. They do not remove any thing from that hill, as they have a superstition that in the event of such a removal the miscreant will lose his way.

There is an image of Mahādeva or Siva on the Ukha Hill; and no one can say when it was placed there. Some say that Ushā worshipped Siva. It is thought that the "country of Pramīlā" described in the Mahābhārata was situated somewhere between the Sema and Burma Hills. There is a tradition among all the Naga tribes that in the neighbourhood of Malami hill—80 miles from Kohima—there is a village solely occupied by females. It is believed that no man can go to that village. The man who

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will approach that "Land of Fairies" will be enveloped by darkness on all sides, accompanied by a heavy downpour of rain, and the hapless intruder will lose his way. The women there preserve bees in big caskets and let them loose on the approach of a man to the village, and the man flees for his life. In a place bordering on the village there blows a peculiar breeze, and women, it is said, conceive on going to that place. A girl baby is fondly looked after and brought up, but a boy baby is killed immediately after birth.

"Ao" is the Naga name for the tribe, and "Hattigori" is the Assamese name. Lungthrok is situated on the eastern bank of the river Diko near Mokokchang.

The Origin of the Ao Nagas.

There is a Naga tradition to the effect that the three brothers—Tiger, Man and Deo or Spirit were first sent to the Lungthrok hill by God. The tiger was the eldest and Deo the youngest of the three brothers who all lived peacefully together. Once the three retired to the forest to offer a sacrifice. The man sacrificed a pig, and the tiger drinking its raw blood resolved to leave that place and go to the forest to live upon raw meat and the blood of animals which he would kill. As the tiger was starting from that place the man stopped him saying, "Well brother, if you find plenty of food in the forest, please keep some meat for me". The Nagas believe that when a tiger kills any animal, he eats half of it himself and leaves the remaining half for them. On the departure of the

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tiger, Deo or spirit prepared, with his hands turned towards his back, a *khang* or basket without the knowledge of the man, and then delivering it to the man said—"I am also going to the forest; when you worship, leave my share of meat, fowl, egg or pork in the *khang* at the place of sacrifice". And saying this, the Deo also went away. It was thus that Deo or spirit made the *khang* or basket. From the huge rocks of the Lungthrok hill there took birth many men and women.

They all began to settle in the village "Changlitati" and when that village became too congested for so many people, the first-created man with a handful of select followers of both sexes proceeded towards the river Diko. The man commanded his followers to cross the river by a bridge made of cane reeds. The first-created man crossed the bridge first and then his followers. The bridge was then cut into two parts when the remaining men and women chased the first comers and wanted to cross the river. One of those who failed to cross the river asked the first-born man "Na Aor", i. e., "Are you going alone?"; "Ni Aor" was the reply, meaning, "yes, I am going alone". "Ao" is derived from this word 'Aor'. The enquirer again asked 'Nai nimir' i. e., you have acted hostilely by not allowing us to cross the river. The Miri Nagas are so called after this word "Miri" or Miri. Even now the country of the Miri Nagas is situated south of the river Diko and that of the Ao Nagas to the north of the same. The first

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batch of men and women settled at Ungma and Karitan after crossing the river Diko. The father of mankind is called Miloti by the Nagas.

The Sub-divisions of the tribe are:—(1) Lung-Subdivisions of khumro, (2) Chami, (3) Along, the Ao Naga tribe. (4) Puman, (5) Paocen, (6) Lungchia, (7) Usam-fu and (8) Lumto.

The Ao Naga is short in stature. The complexion of his skin is mainly yellowish,

The Physical nose flat, eyes small, eye-brows Features and Per- thin and drawn, head flat and sonal Enhance- face elongated. In appearance the ment. AOs resemble the Mongolian tribes.

The men are stout with firm and round muscles. They have a loin cloth for their wearing apparel. On their back they fasten

Males. a piece of wood which is attached to their loincloth. Their Dao or sword hangs from this wood and it is never removed from their body. Specimens of fine handiwork can be seen in some of these pieces. Some wear bracelets made of ivory, some wear beads of conch-shell and some wear bears' tusks. Each ear is perforated in three places. On the upper hole, they wear cotton and into the lower two they thrust in tiny rods of iron. The ear-hole remains seldom undocked. Some wear flowers, and some bamboo reeds, some wear twigs and sprays with leaves.

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yellow stripes, covering one fourth of an inch from the extremities. The ornament is specially in vogue among the Changhi villagers.

They partially tonsure their head, removing the hair about two inches from the temples. They do not allow their hair to grow longer than three or four inches. The bunch of hair on the head, trimmed with precision, resembles a cap. They crop the hair with a *dāo* by placing them on a piece of wood. Scissors have been introduced in certain villages. They scarcely bathe and cleanse their body. Dirt accumulates on their bodies in thick layers.

Their females are generally more beautiful than the males. Young women regularly bathe and are more cleanly in

Females. their habits. The females wear four brass bangles on the right and three on the left hand. Women have generally according to their tribal customs one or two holes on the lobes of their ears. On the upper hole, they put on a huge brass ring fastened with a ringlet of their own hair. On the lower hole, they wear a white crystal called *Natul*. The females are very fond of decorating their persons. They love flowers, and stick them into their ears and their hair. The males are great admirers of their women folk. They decorate their females with ornaments after their individual tastes. At the age of seven or eight, girls are tattooed on their hands, feet, breasts, knees, and chins. Tattooing is executed with the thorn of some plant. The girl

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becomes restless under the strain of this torture. She has to be held down by seven or eight men. Orphan girls are tattooed by other villagers. Females wear a piece of cloth, covering the body from the loin down to the knees. They use another sheet from the bosom down to the knees and they wrap round the entire body with a third piece of cloth. Maidens are more careful in their dress than others. Middle-aged and old women scarcely cover the upper part of their body. They generally use two pieces of cloth. Ao Naga females wear strings of beads of small red stones on their necks.

Ao women do not observe any seclusion or 'purda'. There are different customs of wearing dress and ornaments among the various subdivisions and communities of the Ao tribe. Any one violating the custom is fined and compelled to follow the prevailing custom.

Lungkhumro men wear armlets of ivory, and on their ears small rods of iron. Females wear brass rings

Lungkhumro. and *natuls* on their ears. The loin skirts of women are embroidered with small flowers designed with red thread.

Different villages adopt different marks in tattooing. Four perpendicular lines generally run from an inch above the chin down to the neck, and these are met by the marks running from the bosom. In certain villages the outer chin-marks start a little lower than the two inner lines.

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The men of the following divisions,—Alam, Puman, Patasan, Lungsa, Usamuk and Luntu,—like the Lungkhumras, wear ivory bangles on their hands and iron pins on the lower ear-holes. But the latter privilege is not permitted to the males of the Usamuk tribe. The women of the above tribes like their sisters of the Lungkhumra tribe wear brass rings on their ears and wear *mekhlas* with red flowers designed on them. But the females of the Usamuk tribe wear *mekhlas* with a thin red border and those of Lumato tribe, like their Chami sisters, wear *Natuls* made of crystal only.

Those Aos who before the advent of the British Government fought with other Naga tribes or those who went to the frontiers with British soldiers to fight against frontier tribes twice or thrice, are entitled to wear boars' tusks. Those who have taken the heads of men are allowed to wear on their hands and waist dresses made of *cowries*, and on their breasts red badges made of goat-fur, and behind, near their buttocks, a pendant made of human hair measuring nearly one cubit in length, and on their neck a string of red beads. The red string and the red badge symbolise their accession to fame through bloodshed.

The performer of a worship wears a conch string and if worship is offered to a grandfather, the grandson will wear such a string for full one year. If the same be offered to a father, the son will wear two rows of strings and the same rule applies if the man worships for himself.

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Poor women are not allowed to wear more than two strings of beads on their neck, but the wives of rich men can wear as many strings as they like, and thrust between the gems spikes made of brass. The wealth, happiness and nationality of a person can be ascertained from the ornament he or she wears.

Those who have taken heads by killing men wear a kind of cloth known as *Mingkotapsi*. On the body of a black piece of cloth there run lengthwise six parallel rows on the upper and five on the lower sides, and in the centre small human skulls are painted in red and green. They feel extremely exalted when they wear this cloth.

The full dress of a *sardar* of the Aos consists of boar tusks and strings of red stones and conch shells on the neck, ivory bangles on the hand, red-coloured badge made of goats' hair on the breast, a cloth made of *cowries* overhanging in front, and a spear with decorated handles in the hand.

Naga Village and Houses.

Every Ao village is a well-barricaded fortress. It is situated generally on the summit or ridge of a high hill. The houses are built on hard rocks, and not a blade of grass grows in the village. There is a deep and extensive ditch all round the village; many of these have been filled up at present, but their existence can be traced every-where. This ditch is made to protect the village from invasion from outside. Prior to the advent of the British in the Naga hills there were perpetual feuds and bloodshed among the people of different villages. There

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was a huge wall made of wood and bamboo all round the ditch. At one end there was the Lion's Gate with a huge wooden door. Sentinels or watchmen were posted on the four corners of the wall and on the gate. There was a palisade of spear-shaped and pointed bamboos planted in the ditch to prevent invaders from crossing the same. At the Lion's Gate there was a house which served the purpose of an entrance to the village. The hamlets of the Ao Nagas are like the big lanes of a market-place. The houses are more or less continuous and a lane faces the long line of houses. The number of lanes varies according to the population of the village.

A small path leads to the village, but at present some villages are situated on Government roads. The Nagas prefer their own narrow paths to the straight public roads as they have a belief that by walking on the latter they get cramps in their legs.

The different tribes build their houses in different ways, but all of them are made half of straw. Ao houses look like inverted steamers. They are situated at right angles to the roads, and the front part of the house on the road is the porch of the house, which is open to the Sun by a door. On entering a house, we come into a room roughly levelled to the ground, and measuring about 8 or 10 cubits. This is the first room of the house, having on all sides a bamboo wall. Throughout the house after the front room there is a bamboo *machang*, three or four cubits high, and this *machang* is extended up to an

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open space at the back of the house measuring about ten or twelve cubits. The latter *machang* is ten or twelve cubits high from the ground, and is propped up by bamboo posts. The house affords a different view from the front and from behind. From a distance the house presents a steamer-like appearance. Surrounding the *machang* there is a bamboo wall, with a stair-case and a door in front of it, and there is a small door from the *machang* to the open space behind. The house has two rooms and an open verandah. Between the *machangs* there is a square measuring about six feet in breadth, and the floor of the space is elevated up to the *machang*. A fire is kept lighted throughout day and night which serves as the family fireplace. The interior of the house looks like a work-shop; the females usually spin yarn on the sides or weave cloths or do other household work on the verandah in the open space. They sleep near the fire on logs of wood. They can be fairly said to have no winter garments, which, however, they do not require as they sleep in such close proximity to the fire. The Nagas can never live without fire; they sleep on the roadside kindling a fire. Near the fire-place they have a small shelf where they dry raw fish and meat, making the interior of the house unsuitable for habitation on account of the stinking smell. On the verandah of the house they dry in the sun their paddy, pulse and tobacco-leaves. The *mithans* or bisons generally live in the forests and sometimes in the compound in a cattle-shed at the foot of the house along

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with other cattle. In the first room of the house, fowl, pigs and dogs generally live, and there the females also husk paddy. They make some holes in a huge log of wood and this serves as their *Dhenki* (husking pestle).

The household furniture are kept in the second room which is extremely neat and tidy, and which serves also as their kitchen and bed room. Their granaries are constructed in a separate place on the foot or margin of the village where they store their paddy on a *machang* in baskets from where they take out according to their requirements. But no one touches another man's store.

The son builds a separate house after marriage, and lives separately from his parents. In the event of the death of both the parents, he lives with his brothers and sisters. The father transfers to the son a specified plot of land after his marriage, which is cultivated by the newly married couple to earn their livelihood. The children live under the roof of their parents till their marriage, but will sleep elsewhere from very early youth. The place where the bachelors spend the night is known as *morung*. Every Naga village is divided into several *khels* or localities, and the young man of every *khel* have their *morung*, where they commence spending the night from the age of ten or twelve. The name of *morung-golam* is given by the Nagas to those who live in the *morung*.

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The *morung* is situated by the side of every *Khel* and stands a little apart from the remaining houses.

The Morung is bigger than the average house, and gives some testimony to the artistic skill of the Nagas. The members of each khel look upon their *morung* with pride and decorate it to the best of their ability. In the open space before the *morung* there are wooden seats and the heads of *mithans*, bulls and deer are suspended all around. Pieces of wood with the images of tiger, bear, *mithan* and snakes and birds carved on them are fastened to the front wall. In the second room the *morung golams* spend the night on small *machangs* made higher than the general one. The third room serves as a closet or urinal emitting such an obnoxious smell that it makes even the second room unfit for entrance. The *morung* has no open verandah at the back as in the ordinary house. Women cannot visit the *morungs*. Virgins till their marriage spend the night with the elderly women of the village.

Young men and women mix freely, and Ao parents do not keep any watch over the character of their daughters, who allow themselves to be courted by lovers according to their own sweet will, and have not a very high regard for chastity. The Nagas ease themselves everywhere and cleanliness is practically ignored. Every Khel has its allotted place for sitting for both men and women.

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image of a tiger on a huge piece of wood which will be brought in the evening to the village. The Morung Golams do not attend this function. But they, in the company of the three old men of the *Nichaba Genna*, slaughter on that day ten pigs, the meat of which will be distributed to all the members of the *khel* after the wooden effigy of the tiger has arrived at the village. The *Morung golams* will then retire to the forest with meat, rice and other eatables and the *morung* will be constructed by other people. The Morung Golams will not return to the village till the house has been completed. These who communicate with the *morung golams* in the forest will give very comical names to the latter such as monkeys, wild rats, jackals and boars. The *morung golams* will accept these appellations most cheerfully and there will be a wild uproar of laughter. If any of the men engaged in the construction of the *morung* is approached by a *morung golam*, he will at once fall flat on the ground as if dead, and will assemble the men of the village by calling them loudly, and give out the story that he has been beaten by the *morung golam*. The villagers will then return to the "injured" man's house along with the Morung Golam and will remove the meat and fish of his house which they will all enjoy together, and the *morung golam* will return again to the forest, and will bring all his comrades back on completion of the construction of the house.

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one another. Nankam is situated on the summit of the highest hill, from where Golaghat and Chariali can be seen. In that large village consisting of 800 households, women are more numerous than men. Before the British regime, the Nankam Nagas dominated over the Ao tribes and exacted tax from them. Before the advent of the "Pax Britanica" war was the custom of the day, the object of which was head-hunting. The man who could take the largest number of heads would be the most honoured man in the village and would wear the best dress and ornaments. The tree from which the heads were suspended was known as Aku. All the human skulls in their possession were burnt by the Nagas by the order of the Subdivisional Officer, Mr. Noel Williamson. The Nagas used to live in perpetual fear, their free movements were curbed and they could not even engage themselves in cultivation without anxiety. The weaker specially lived in dread of the stronger. Under the peace and protection afforded to them by the benign British Government, they are now moving freely everywhere and cheerfully taking to their agricultural pursuits.

Scoungkong is the war-drum of the Aos, which is made by boring the trunk of a tree having a large diameter. It looks like a croco-

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diameter and 59 feet in length of which the head is 11 feet, neck 3 feet, body 40 feet, and tail 5 feet. The drum is tightly fastened to a stone. Three or four drum-sticks measuring 11 or 12 feet in length and 3 or 4 inches in diameter are attached to the *Scoungkong*,—and these sticks beating upon the drum provide the war-music of the Nagas. This drum was beaten when the victors entered triumphantly into their own village after defeating a neighbouring village, and taking human heads with them. But this head-hunting was possible before the annexation of the country by the British. Even now this national drum is beaten to welcome the villagers returning to their own village after participating in a frontier expedition, say, with the Miris, the Mishmis or the Abors or coming back with a human head or any part of a human body. A Naga failing to bring with him a human head from any such frontier expedition, stealthily removes the finger or the nose of a dead body to enable him to perform a *genna* on returning home. The *scoungkong* is beaten on *genna* days and also on the day of the dark moon.

The Aos believe that the Sun and Moon are the greatest phenomena of nature and that on the days of an eclipse of the moon, the moon is swallowed by a tiger who releases the victim on hearing the sound of the *Scoungkong* and there will be no disturbance in the village. The Aos beat the drum also on lunar and solar eclipses under the influence of the same superstition. During an eclipse all the villagers assemble in the *Morung* and weep.

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Now *Scoungkongs* are made in the months of January and February, with the co-operation of all the villagers. But the work must go on outside the village, and the whole *khel* must feed and bear the expenses of the actual makers of the drum till it is ready and installed in the village. Rice-beer, meat and rice are daily carried to them in the forest. A house is constructed on completion of the drum which is ceremoniously brought to the village, being drawn by stout ropes. The owner of the land where the drum is placed is attired in the dress used in the *Moachi Genna* and sits in front of the drum; and 24 warriors or head-hunters of the village sit in two rows near the drum, and the drum is drawn by the remaining villagers with ropes. The females touch the rope at the middle, and the males at the two ends. After the drum is installed in the village, all members of the particular *khel* will feast the whole body of the villagers.

Food and Drink.

The Aos have a remarkable fondness for meat, and their males eat the flesh of all animals excepting elephants and snakes, their chief games being bears, monkeys, dogs, *mithans*, pigs (tame and wild), bulls, hens, deer and various kinds of birds and fish. The females only take fowls, tame pigs and fish. They boil meat and fish with water, or roast them, and eat them with salt and chilli. Rice is their staple food and they take plenty of salt and chilli. The Naga *madhu* or rice-beer is their principal drink and is pre-

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pared in several ways,—the chief preparation being known as Ruhi. This liquor is prepared with rice and the yeast of certain leaves.

Gourds and bamboo *chungas* or tubes are used as receptacles of Naga rice-beer. A guest is first welcomed with this wine. The Nagas carry rice, meat and rice-beer where-ever they go, with which they refresh themselves when necessary. At present the Nagas of both sexes and of all ages have taken to the use of cigarettes, the cheap varieties of which are circulated widely in the hills. Tobacco leaves are very dear to the Aos, and these they take after drying and pounding them, in pipes made of bamboo or wood. They sometimes put some fresh tobacco bits in their mouths or eat them with betel-nuts. The Aos use with betel (*pan*) leaves the bark of some particular tree, in place of betel-nuts. The present of a tobacco leaf or a cigarette is enough to humour a Naga man or woman. Travellers are usually importuned for presents of these things by the Nagas. They never drink milk. Those who live by the side of rivers catch fish by poisoning them with the juice of some leaves or fruits thrown on the current. Thus poisoned, all the fish come up floating on the surface. The water thus poisoned, and the fish caught by this process are not poisonous to men.

The Nagas fetch water from the springs or fountains at the foot of the village, in bamboo tubes, 3 or $3\frac{1}{2}$ cubits long, the joints of which have been already pierced to allow the water to sink to the bottom. The tube or *chunga* placed on a *khang* is carried on the back.

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Property and Inheritance.

The moveable goods of the Nagas consist of their cash, ivory, boars' tusks, gems threaded on strings, *mithan* bulls, pigs, paddy, the *natul* of the women, apparels, spears and their *daos* etc., their immoveable property consisting of arable lands and bamboo clumps. The eldest brother gets the largest share of the moveables and the remainder is divided equally among the other brothers. The eldest brother also inherits the ancestral abode.

Naga custom does not allow any partition of real property. Brothers cultivate jointly, and divide the produce, either paddy or pulses. Sometimes the brothers mark off portions of the field for their respective cultivation, but no permanent partition of the land is effected. The male issue of the brothers inherit equal portions of the paternal moveable property, as if they were the uterine children of the same father. But in the presence of the brother's own son, the nephew or the first cousin does not inherit the self-acquired property of their uncle. Females do not inherit any estate. Widows live in their deceased husband's house and are supplied with paddy for their maintenance, provided they do not take second husbands. A father of affluent circumstances makes gifts of moveable property to his daughters, such as paddy, pulse, *mithan* bulls, pigs etc.

Agriculture and Crops.

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Their calculation of the year is based on the bringing-home of the harvest. The females carry their babies with them to the field. I have seen the ploughing of a land by 20 young and middle-aged women, all wearing their *mekhalas*, each with a hoe in her hands.* They were singing merrily and did not stop their work for a minute. We watched them thus at work for nearly half-an-hour. Two or three babies were lying on the ground, and were attended to by the mother the moment they cried. Their inexpressible music resounded over the entire hill. Paddy, pulses, tobacco, chilli, arum, pumpkin and cotton are their chief products. Naga females spin yarn from cotton with which they weave cloth. Every family has a spinning wheel and a handloom for weaving purposes.

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Education.

Through the efforts of the American Missionaries, education has spread in the hills and at present a number of Angami and Ao Naga boys are being educated in the Mission school. The missionary headquarters are stationed at Kohima and Imphal, and in the Mission Schools, the Ao and Lhota Nagas are acquiring the rudiments of knowledge. At Mokokchung there is a Government Primary school where English and Assamese are taught. The Missionaries have opened schools in numerous villages, specially in those where there are Christian converts, where churches are also established. The Nagas have no written language and the missionaries have adopted the Roman Alphabet. Students are taught history, geography, arithmetic and drawing. Mission schools are aided by the Government, and arrangements have been made for imparting technical education; and in carpentry the Naga youths have shown special proficiency. Naga Christians have learnt to sing sacred hymns in their own language. At present Ao boys and girls are attending schools at Shillong, Gauhati and Nowgong.

Trade.

The following indigenous products of the Naga Hills are brought down for sale in the plains—cotton, rubber, tea, sugar-cane, cardamum etc. while their chief imports are beads, bangles made of glass, zinc or brass, boars' tusks, ivory and glass *natuls*. These are chiefly imported from Calcutta, Bombay and Burma. The Angamis are noted for their widespread commercial activity

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in which connection they have to visit distant places. There is a public path to Burma through Manipur and the Sema hills which route is generally adopted by the Nagas.

Revenue and Village Administration.

The British Government has imposed a tax of Rs. 2/- per annum on every Ao household, exempting their arable lands from any rent. Old and helpless women, public interpreters, postmen and village head-men are exempted from the aforesaid tax. The *Gaonburā* or village-headman is the most powerful man in the village. Government selects competent men to hold the post of *Gaonburā* and their decisions on village matters are sometimes accepted as final by the Government. Those cases where *gaonburās* have not been able to arrive at any decision are taken up by the Government. The *gaonburās* make all possible arrangements for the convenience of the travelling officers of the Government, and deposit the revenue of the village at the Government treasury for which they get a commission of Rs. 12½ % on their collections. The *gaonburās* and the interpreters receive a red *Bānat* or shawl every three years as a present from the Government which they accept most eagerly and preserve with extreme care and pride. All the *gaonburās* excepting a few know the Assamese languages. Office work is carried on with the aid of interpreters.

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Imna Mirin was the chief of the Aos at the time I was residing at Mokokechung. He has built a large house roofed with corrugated sheets, and has 150 *mithans*, the price of each being on an average Rs. 100/-. He has sufficient cash and was the chief interpreter of the Government offices at Mokokechung. Mirin was the only Ao practising wet cultivation or *Pānikhet*.

Debts and Repayment.

The Aos borrow cash and paddy, without any document. Debts, if not repaid during the course of the first year, will be doubled (with interest) in the second year. Nobody has ever heard of any Ao not admitting the loan he has taken. Ancestral debts are repaid either by the son or the grandson, and in their absence, by other heirs.

Hunting.

The Naga is strongly built and is noted for his courage. He roams alone in thick forests with a spear and a *dao* in quest of game and fuel. At the prospect of game the Naga becomes extremely jubilant. On receiving reports of the

grievances are discussed and remedied by the *Gaonburā* sitting with the village elders. If the guilt of the alleged offender is proved, he is fined, which can be paid either in money or in kind in the shape of paddy or cattle. The fines thus imposed are spent in feasting the village interpreters, *gaonburā* and the seniors. The members of a *panchāyat* serve for 30 years after which their functions descend to their sons or nephews, or some other relations.

Imna Mirin was the chief of the Aos at the time I was residing at Mokokechung. He has built a large house roofed with corrugated sheets, and has 150 *mithans*, the price of each being on an average Rs. 100/-. He has sufficient cash and was the chief interpreter of the Government offices at Mokokechung. Mirin was the only Ao practising wet cultivation or *Pānikhet*.

Debts and Repayment.

The Aos borrow cash and paddy, without any document. Debts, if not repaid during the course of the first year, will be doubled (with interest) in the second year. Nobody has ever heard of any Ao not admitting the loan he has taken. Ancestral debts are repaid either by the son or the grandson, and in their absence, by other heirs.

Hunting.

The Naga is strongly built and is noted for his courage. He roams alone in thick forests with a spear and a *dao* in quest of game and fuel. At the prospect of game the Naga becomes extremely jubilant. On receiving reports of the

depredations caused by any tiger, bear or elephant, the villagers come out with spears and *daos*, preceded by hunting dogs barking with all their might and followed by other villagers who carry provisions for them. Sometimes they light huge fires on all sides of the village, thus practically besieging the animals. Every act of theirs bespeaks their valour and manliness.

Though the light of modern civilisation has not yet touched the Nagas, yet they are straightforward, sweet-tongued, hospitable and truth-loving and content with their lot,—with the clothes and food produced by their own labour. They have few wants and have not acquired the vices of luxury and dissipation.

A Naga, Chiluyangba by name, was returning from his field to his village Juju, a few miles distant from Mokockchong. He saw two bear cubs on the roadside one of which was hacked by him to pieces while the other escaped into the jungle. Hearing the screams of the young one the mother bear rushed on the Naga and attacked him. The Naga with his small *dao* aimed a blow at her head. But the instrument broke into two pieces and fell on the ground, yet the Naga was not unnerved, and a deadly scuffle ensued between the hill-man and the brute. At times he caught hold of the bear's ears and threw her off, while at the next moment she flung upon and tore him to pieces with her nails drenching his body with blood. After a while the bear let him off and ran into the forest; the man was brought to the hospital at ten o'clock at night,

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and the injured and lacerated portion of his body had to be sewed. The brave fighter soon recovered from the injuries and I was deeply impressed by his courage and pluck.

Disposal of Dead Bodies.

The dead bodies of well-to-do Nagas are placed on the courtyard of the house, and those of the poor on a high *machang* in the front room, for five days in the case of females and six days in the case of males. The same rule obtains with regard to the dead bodies of children. On a fixed day the corpse is carried to the burial ground, generally situated by the road side at the entrance of the village, where there is a large number of small huts with *machangs* inside. A hut is constructed for depositing every corpse which is placed in a prostrate position on the *machang*. The Aos actually allow their dead bodies to be scorched, and according to the social status and means of the man, spears, *daos*, and images carved or painted on wood or bamboo are suspended on all sides of the *machang*, and the dead bodies are attired in their finest dresses. Special obituary rites are performed in the case of Minenris who are called 'apotia' by the Assamese. This name is applied to those who meet accidental death, by falling from a tree, by being drowned in water, by being devoured or mauled by tigers, and including also those women who die in child-birth. Their dead bodies are not kept in the house for a single day. They are removed

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on the vary day of death, being borne by the old men and women of the village. The inmates of the Minenri's home do not accompany the corpse, or stir from home for four or five days except for fetching water. During this quarantine period they live upon the flesh of the domestic *mithans*, bulls, pigs and hens. On the sixth day an old woman approaches the house and throws a stone into it from near the door. The inmates instantaneously leave the house and go to live for one month in a hut on the outskirts of the village. The villagers supply them with cloth, rice, salt and chillis for the period, but are not allowed to talk with them. As in their own house so in this temporary hut, the exiled people will not go out except for fetching water from a place specially meant for them. After a month they leave the hut and go out for work. They build a new house, the old one with its contents being taboo to all Aos. A *genna* lasting for three days is performed in the village on the death of a Minenri. During this period the villagers will not leave their homes, except for bringing water, and, on the third day, for bringing fuel. The *genna* performed on the death of a man other than a *minenry* lasts for two days only, the first on the day of death and the second on the funeral day. No work can be undertaken on the two days, nor may the villagers come out of their homes. The violation of the above restrictions is regarded by the Aos as disastrous to the welfare of the village.

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Marriage Customs.

Among the Nagas, marriages among descendants from the same stock are tabooed. The maidens and youths of the same stock look upon each other as brothers and sisters.

Inter-marriages between the Lungkhumro and the Chami, Puman, Alam, Paosen and Lumtu are allowed. Marriages may take place between the Chami tribe and the Lungkhumra, Paosen and Alam, and similarly between the Alang and Lungkhumra, Chami, Puman, Lungra, Lumta and Usouk. Inter-marriages are allowed between the Puman, Lungkhumra, Alang and Lumta tribes.

With the Paosen tribe members of the Lungkhumra, Chami, Lungsa, Ushmukh and Lumto tribes may marry. Inter-marriages between the following tribes are also allowed. Lungsa, Alang and Paosen; Ungro and Alang and Paosen; Lumto and Lungkhumra, Paosen, Alang and Puman.

The marriageable ages of young men and spinisters range between 20 and 25, and between 18 and 20 years respectively. Married couples are sometimes of the same age. Courtship is allowed and continues for a period of six months to three years before marriage. In some cases it is extended up to five years. After long continued courtship if the pair do not find each other agreeable the marriage falls through. Among the Ao Nagas, courtship is an invariable preliminary to a marriage. During the period of courtship the couple behave as husband and wife. Among the Assamese this period of courtship is known as the 'mating' period. In the event of a

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marriage not following a prolonged courtship, no disgrace attaches to either party. After the couple part with each other, they may select new mates as their lovers.

Some maidens are courted by 10 or 12 men before they finally select one as their husband. Some one may meet only one young man and they may marry. If a virgin conceives during the period of courtship then her lover will be compelled to marry her, and if he be not willing to do so, he will have to maintain the child for five years, after which the man will be the guardian of the child. Courtship is carried on without the knowledge of the guardians, but they naturally come to know about it in the case of a prolonged courtship. If the young man wants to marry he will communicate his desire to his parents. At first the young man's father presents to the bride's father four or five fishes. This is the initial ceremony leading to the marriage. After the present of fish is made, the couple will not be allowed to woo fresh lovers. Fine is imposed if this rule is violated. If the pair do finally intend to marry they may do so even after the payment of fine. Immediately after the presentation of fish the bridegroom's father will present to the bride's father five baskets of paddy and a *dāo* of superior quality. The parties concerned will remain very neat and tidy the whole day, and are anxious that no death may occur in the village. The day is very auspicious for the marrying couple. Four or five days after the paddy has been presented, the bridegroom, with money pre-

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sented to him by his father, and with the help of the villagers of his own clan will build a house of his own. Within three days after the construction of the house, he will arrange for the furniture and requisites for a separate residence. On the fourth day the bride's mother with 10 or 12 of her own clanswomen will, in the company of the bride, go to the newly constructed house of the bridegroom. The young man will be accompanied by his mother and their friends and relations. The fathers of the bride and the bridegroom are not allowed to go there. The assembled people will be treated with boiled rice, meat and *madhu* or rice-beer.

After the feast, an old man of the bridegroom's party will hold a fowl close to the face of the bridegroom and chant some incantations, and the same fowl will be held up before the face of the bride to the accompaniment of a formula the purport of which is as follows:—"May you live long in peace and happiness, let your home be free from all annoyance and trouble, and may you see the face of children". After this the fowl is killed outside the house and its meat is taken by all except the bridal pair. They cannot go out of their house the whole day. Most of the guests assembled pass the night in the house of the bridegroom. For seven days after the marriage the new couple will not stay together. The day after the marriage they go together to gather fuel in the jungle. Neither the bride nor the bridegroom can take a new mate within a

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month of their first marriage in the event of a dissolution by divorce, death or otherwise.

Divorce is in vogue, and is frequently taken recourse to. After a divorce, a second wife or a second husband can be accepted. All marital separations are generally due to the wantonness of the pair, the sterility of the wife or her quarrelsomeness. The guilty party must compensate the other for the loss suffered. A wife found quarrelsome and unfaithful will be divorced by the husband and will not be entitled to any property of the husband. The children will be kept by the husband. If the child be a baby sucking mother's breast, it will be in the custody of the mother till it is five years old, but the father will bear the cost of his maintenance. If a wife be divorced on account of her sterility she will be entitled to half the pigs, fowls, paddy and furniture belonging to her husband. If the husband is divorced by the wife on account of his adulterous habits, she will be entitled to her full share of the above. The wife has no claim upon the land and house of the husband.

The same marriage customs prevail among all the Ao clans. The young men and women of the same clan cannot intermarry and if they are found to be in love, they are fined and turned out of the village. Sometimes they are let off with fine only but they become objects of ridicule and contempt.

Religion and Gennas.

The Ao Nagas believe in one Supreme God whom they call "*Liehaba Ali Yang Raba Sangram*"

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(Lichaba=God; Ali yang Raba=the Creator of the earth, including men and plants; Sangram=holy spirit.) Thus it means, 'the Deo who has created the earth is the Great God'. They worship God or Deo; they also worship big certain stones in the month of January. The object of this worship is to avert epidemic diseases in the village, to secure a bumper harvest in the fields, and to save the crops from floods and inundations. They believe that in the absence of this worship they will surely be liable to the dangers mentioned above. The above worship is known as *Lunglangba Khalam*—(*Lunglangba*=rock, *Khalam*=worship). A pig and two fowls are offered as sacrifice in this worship. They will lay out 100 pieces of pork in one place, and in another—50 pieces, and *madhu* on 100 leaves. And a fowl will be let loose. No one can eat either the fowl or the *madhu* or the meat. They believe that the man who partakes these offerings will run mad.

For securing an abundant crop, they perform sacrifices in their respective fields where a pig and a fowl are sacrificed. Six bits of pork are placed on the ground and *madhu* on three leaves. This sacrifice is known as *Alupensa Genna*.

When a Naga has his hands and feet severely bruised or cut or fractured while working in the field, or when he is attacked with dangerous illness, he will be regarded as being possessed in that particular field and appropriate sacrifices will

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When a Naga has his hands and feet severely bruised or cut or fractured while working in the field, or when he is attacked with dangerous illness, he will be regarded as being possessed in that particular field, and appropriate sacrifices will be offered for his speedy recovery. This *genna* or worship is known as "Rentinre" or "Arakis".

A pig and a fowl will be first killed in front of the man's house, and a fowl will be set free and an egg will be broken. Then a regular sacrifice will be offered on the spot where the man was possessed, by killing a pig and two fowls. letting loose two hens and breaking two eggs. As in the sacrifices performed in the fields, six pieces of meat will be placed in three different spots and *madhu* on three leaves. In the case of a woman five bamboos and that of a man six bamboos will be planted at the place of worship and three *khangs* will be suspended.

The following *Gennas* are peculiar to the Aos, and can be performed by all men of means; but this must be done in order of succession, the violation of which rule will make the man unfit for performing sacrifices.

(1) The first sacrifice in precedence is *Tongsitong Khalam* which is performed in the house and can be offered at all times. One pig has to be sacrificed and a present of a pig and a basket of paddy is to be made to the Arasinre. For six days the worshipper is not allowed to leave the village nor to take anything belonging to another house.

In every village there is an Arasinre. They pray for the welfare of others, look after the sick and administer medicines. They are the hereditary priests and physicians of the village. Other people not in the direct line of descent from an Arasinre can never be Arasinres. They receive as their perquisites a fixed portion of paddy from every man in the village.

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(2) *Kitsug khalam*—The next sacrifice to be performed is *Kitsug khalam*, but this order is not observed by all people. Sometimes the *Tongsitong khalam* worship follows the *Kitsug khalam*. In the latter a pig and a fowl have to be sacrificed in the house. People other than the members of the family will not be allowed to come to the house. The husband, the wife and the children, if any, will participate in the feast. No portion should go to other people. In this sacrifice also the performer will not leave the village for six days and will not take anything from others' houses.

(3) *Monglamangfopat*—This sacrifice is the third in order of precedence. The requisites of this sacrifice are 70 to 80 baskets of paddy, 2 big pigs and 30 to 40 fowls. The pigs and the fowls will be killed in the courtyard of the house. *Madhu* or rice-beer will be brewed with rice extracted from 40 to 50 baskets of paddy, and rice alone from another 20 to 30 baskets. Every *khung* contains 20 to 30 seers of paddy. Besides these, dried fish and meat are required in large quantities. A feast is given to the clansmen and relations living in the village. This sacrifice lasts for five days; the first two days are devoted to the brewing of *Madhu*, the third to the sacrifice of pigs, the fourth to the slaughter of fowls and the fifth to the general feast. The restrictions concerning the leaving of the village and taking other peoples' things are extended to one month.

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(4) *Aniptang fopat*—The next sacrifice is *Aniptang fopat*. The third and the fourth sacrifices are marked by the same ceremonies, the only difference being the slaughter of a monstrous pig in *Aniptang fopat*.

(5) *Nafotsa*—This stands fifth in order of precedence. In this sacrifice, 70 to 80 baskets of paddy, a bull, a pig and a fowl are required. It lasts for five days. The first four days are devoted to the gathering of fuel and the making of *madhu*. On the fifth day the bull, the pig and the fowl will be slaughtered. On the spot where the bull is killed there will be placed a wooden 'Hargara' or cross and the fowl will be tethered to it. This sacrificial fowl cannot be eaten by any body. The Morang Golams i. e., Village bucks sleeping in the *morang* will kill the bull and they will be supplied with liquor named *Rui*. For one month the sacrificer will not go to graveyards and places where dead bodies are kept.

(6) *Foar*—This is the sixth sacrifice, of which the requirements are 100 baskets of paddy, 10 pigs and three or four hens, and it lasts for four days. Fuel is gathered on the first and second days and beer is also prepared on those days. On the third and fourth days pigs and hens are sacrificed. A feast is given to all the inmates of the village, and in the case of certain villagers their share of the meat is sent to their houses. The Sacrificer is allowed to leave his own village or to go to any graveyard.

(7) *Akkikha*:—*Akkikha* is the ninth sacrifice.

(4) *Aniptang fopat*—The next sacrifice is *Aniptang fopat*. The third and the fourth sacrifices are marked by the same ceremonies, the only difference being the slaughter of a monstrous pig in *Aniptang fopat*.

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(6) *Foar*—This is the sixth sacrifice, of which the requirements are 100 baskets of paddy, 10 pigs and three or four hens, and it lasts for four days. Fuel is gathered on the first and second days and beer is also prepared on those days. On the third and fourth days pigs and hens are sacrificed. A feast is given to all the inmates of the village, and in the case of certain villagers their share of the meat is sent to their houses. The Sacrificer is allowed to leave his own village or to go to any graveyard.

(7) *Akkikha*:—*Akkikha* is the ninth sacrifice.

It lasts for one month and the following materials are necessary, viz., 5 to 6 hundred maunds of paddy, 30 pigs, 22 bulls and 10 fowls. All the villagers will be invited to the feast lasting during the period of sacrifice. The performer of the sacrifice must not leave his village for one year or take food at the hands of others for one month.

(8) *Agicha* :—The next sacrifice is *Agicha* where 20 to 25 maunds of rice, 2 pigs and 3 to 4 fowls are necessary. It lasts for three days. The *morung golams* and *Ranglus* (village gallants and maidens) of the same class are invited to a feast and they are entertained with dancing, music and amusements. For six days the man will not leave the village or take others' food.

(9) *Sichatang* :—This is the ninth sacrifice. This is the grandest and the final sacrifice of the Aos, being the last one of the series. The performance of this sacrifice can be repeated as many times as possible, according to the circumstances of the worshipper. A bull, a pig, three or four hens and a *mithan* or bison are required. The number of *mithans* is not fixed; it ranges from one to twelve. More than a hundred maunds of paddy are required. The sacrifice lasts for ten days. The first five or six days are devoted to the chopping of wood and the preparation of *madhu*. Then the scaffold for slaughtering the *mithan* is brought from the forest. On the ninth day the *mithan* is killed. The day following, rice is pounded in front of the house. The house of the performer of this sacrifice must have

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triangular roofs and the sacrificial scaffold must remain permanently fixed in front of his house. From this sign, the fact that this householder has performed the *Sichatang* sacrifice can be ascertained. On each side of the house door, six pitchers engraved on wood and known as *Molong* are posted. Various kinds of birds—all made of wood will be affixed to the roof of the house. A piece of wood with the image of a tiger and a goat engraved is fastened to a post. A flower made of bamboo and straw is fixed on the roof in the shape of a cross and earthen cups are inserted between the petals of the flower, and two cane leaves are attached to them.

The cross-shaped flower made of bamboo and straw is called *Waza*. The cup, the straw and the cane look like a tub and are called *Posam*. Triangular straws and cane leaves are piled upon the *posam* and this is known as *Sensheri*.

The performer of a *Najotsa* sacrifice will plant a perpendicular post and two inclined posts in front of his house. On the top of his house there will be first a *posam* and then two *wazas* made of straw.

The performer of *Akkikha* and *Agicha* sacrifices will fasten a bamboo post to the perpendicular wooden posts and on both sides a pair of cross-shaped bamboo posts. On the roof of the house there will be fixed a large number of *wazas* made of bamboo, two *wazas* made of straw, and two *posams*.

The personal or individual *gennas* or sacrifices mentioned above cannot be performed more than

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once a year. Sometimes one to four years elapse between the first and the second sacrifices. No fixed time is prescribed for the *gennas*: it depends upon the means and convenience of the performer. The sacrifices except *Chitatang* cannot be performed more than once. Well-to-do Nagas perform the *chitatang genna* every year during their life time.

The Aos have some more *gennas* or sacrifices of a communal character. These are the following:

(1) *Tokong khalam*:—This sacrifice is performed in the month of March by the elders and youngsters of a clan by the side of the foot-paths through their respective fields, the requisites being a pig, a hen and six eggs. The eggs are broken on the foot-paths and the pigs and hens are killed and eaten by the worshippers at the place of sacrifice. The surplus meat is carried home. The object of this worship is to secure abundance of crops.

(2) *Ongkomat*:—This is called by the Nagas Bread Sacrifice (*Ongko*=bread); and is performed on the Hindu "Hôli" day. A few youths selected from the *Morung Golams* kindle fires at four different places and a youth from the village carries thither a loaf, and when he returns after leaving the loaf there, he is beaten with a half-burnt log of wood. The youth will take to his heels and will come back again to the *Genna* with a fresh loaf. He will be beaten again and will again return. This will be repeated thrice. If the youth is beaten severely, his place will be taken by another. The eye of an Ao youth was burnt in the process and was under my treat-

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ment for a long time.

(3) *Lichaba Khalam*:—This is pre-eminently the Divine worship of the Aos. The three oldest men of the village perform this sacrifice at the foot of the village with the help of a pig, a hen and an egg. The pig and the hen are killed and are kept at the place of worship. Fifty leaves will be spread with five pieces of meat on each, and sixty leaves or more with beer in them. The old men will eat there and carry the surplus meat home. This meat cannot be eaten by any one in the village except the three oldest men. The day following the sacrifice is deemed an auspicious day for the whole village. This sacrifice is performed in the month of April.

(4) *Chitan*:—This is performed in May. Like the Lichaba sacrifice, this *genna* is performed by the old men. At the place of the lichaba sacrifices, a pig, a fowl and an egg are again sacrificed. The peculiarity of this sacrifice is marked by the fact that the boys and youths who have not yet been admitted to the *Morung* house will go to the place of sacrifice and snatch the meat from the old men. 'Chitan' in the Ao language means taking by force. The members of the village where *Chitan* is performed stop all communications and transactions with the people of neighbouring villages for six days. They will be allowed to eat in the 'auspicious' village but will not be allowed to carry anything with them.

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members of the village perform this sacrifice on the path leading from the village to the field, with a pig and a hen. They carry beer in innumerable gourds. At the end of the sacrifice, the youths of this village erect a huge *machang* or raised bamboo platform on which they drink *madhu* and eat meat and dance and sing in riotous revelry. The old men retire to the village. The youths kindle a huge fire in the *morung* house where they start a most wanton kind of dancing and singing at the pitch of their voice. Then all the people, including the elders and the juniors, fix a day for the *Moachi* sacrifice, which announcement is followed by universal rejoicing and revelry in the village. All family sacrifices will be suspended in view of this worship.

(6) *Moachi*—This is performed in the month of June. Before the sacrifice the *Morung* youth bring fuel from the wood, prepare wooden rests for their *daos* and all villagers raise subscriptions from their respective classes to purchase pigs. This sacrifice lasts for seven days. A pig is killed on the first day and all partake of *madhu* and meat. The young men put on ceremonial dress and go about singing and dancing in several places in the village and eat plenty of meat and drink wine there. On the fifth day they make a road to the village, on the sixth a path-way to fetch water, and on the seventh a path to the place where fishes are caught. This is the most favourite sacrifice for the youths, and there is a carnival of merry-making in the village.

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(7) *Tsenggrammong*:—This is celebrated towards the end of July, and on this occasion young men and maidens all become absorbed in joy and merrymaking, and there is universal rejoicing in the village. In their houses young and middle-aged women brew wine out of rice, the young men bring from the forests long strips of bark and make from them long and stout ropes, after which for three days, there ensues a festivity of rope-pulling in full swing. The young men and women will have no rest nor any sleep; they will go about from house to house eating and drinking and singing and dancing. In the afternoon, in front of the *Morung* house, attired in their best apparel they will be engaged in a tug-of-war. The youths pull uphill; and this tug-of-war will be accompanied by a song. There will be keen rivalry between the singing of the maidens and the youths.

(8) *Imkhalam*:—This is performed in August after the *Changramong* sacrifice in a central place in the village. A bull, a pig, a dog and a fowl are required. It lasts for one day and meat is partaken of by all villagers. The lion's share will be allotted to the elders who had performed the *Nichaba khalam* sacrifice; then will come the gallant warriors of the village or those who have taken human heads. The quantity in this share varies according to the number of skulls they have collected. The remaining portion goes to the rest of the villagers. Before the British annexation the spoils secured after defeating a village were divided in the following order:—The lion's share went to the three old performers of the *Nichaba* sacrifice, the second share to the gallant warriors

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The expenses of the aforesaid *Gennas* are met by all the villagers on account of their social and communal nature. Paddy is collected from the village in the month of January, from which the expenses of the yearly *gennas*, i. e. of purchasing the pigs and fowls are met. This paddy collection is also of the nature of a festivity to them, and is known as *Sabisaru* meaning money-collection. The participants in the function drink *madhu* and eat meat sumptuously.

(9) *Sasongtang*—This is performed in January after the *Sabisaru* festivities, and this is also a public sacrifice of the village. The ditch or trench surrounding the village will be re-excavated, the sides will be newly fenced and the Lion's Gate at the entrance of the village will be repaired. There are now very few duties connected with this *genna* as the trenches and the village barricades are no longer necessary. What they do at present is the digging of a small surface and the repairing of the entrance-house to the village. The Nagas commence their new year after the *Sabisaru* and *Sasongtang gennas*. The debtors who cannot repay their debts will tell their respective creditors the fact of their inability to do so, and in lieu of it

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IV. PYGMY IMPLEMENTS.

FROM THE

LOWER GODAVARI.

BY L. A. CAMIADE, BAR-AT-LAW,

Chief Presidency Magistrate, Madras.

Introduction.

Implements of small size have been used by man from palæolithic times for boring, engraving and other purposes. The peculiarity of the implements known as pygmies lies in the fact that the camps where they occur contain usually nothing but dwarf implements. Such camps have been found in England, Belgium, France, Southern Spain, the Crimea, Palestine, the Sinai Peninsula, Egypt, North Africa and South Africa and lastly India. Not only are the implements in all these various places surprisingly small in size but they all bear a strong family resemblance.

It is now about sixty years since pygmy flints were first discovered in India. Between 1867 and 1868 Carlleyle found them in sand

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pygmy implements, whether Indian or foreign. The Indian pygmies which he describes were all manufactured from tiny flakes. He classified them under five general types :-- crescent, triangular, scalene, rhomboidal, and a type with one end more or less elongated to a point.

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Types.

1. Flat Butted Adze and Gouge Heads.

Among the many types of implements found in these pygmy camps of the Lower Godavari the one to which I first want to draw Indian pygmy gouges identical with Australian gouges. attention is the flat-butted adze or gouge head. It is an implement identical in type to those in use among the Australian aborigines of North Queensland at the present day.

The Australian gouge ³ is made from a small semi-circular flake about $\frac{3}{4}$ " to $1\frac{3}{4}$ " in diameter.

The unfinished flake will easily pass for a waste chip and even the finished flake looks fragmentary. The finished flake is fixed with thick cement or gum to the end of a stick, care being taken that the wood does not actually touch the stone. According to size and shape the implement is used for cutting, shaving or scooping but it is specially used for the excavation of troughs and, I think, even of canoes. The gouge is the chief industrial implement of the Australians and is of far greater importance to them than the celt.

The resemblance of the Indian pygmy adze heads with the Australian type, may be clearly seen in a few exceptionally well-made and elaborately chipped Indian pygmy gouges. Indian pygmy implements made of chert in my collection The size of these implements and the elaborate chipping they

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have undergone renders their design obvious. But the average Indian pygmy adze head is very much smaller, measuring like the Australian gouge heads only about an inch in diameter.

Indian pygmy gouges resemble the Australian gouges in the essential particular of the flat butt, and also in size as well as in shape; but made chiefly from nodules; Australians, from flakes. They are made chiefly from cores while the Australian gouges are made from flakes.

The indian gouge head has a further peculiarity—which obscures its identification considerably.

It is only rarely that it is made from a pebble chipped *ad hoc*. Exhausted cores converted into gouge heads. Most frequently the gouge head is made from a pebble that was primarily used for obtaining longitudinal flakes. At first sight the Indian gouge head resembles a disused core; and very often the gouge is made from a disused core.

(These gouges seem to have been copied from incisor teeth. To obtain the concave cutting edge the cores are flaked on the under side in a direction transverse to the flake grooves on the dorsal side).

There is a technical detail in regard to the fashioning of the under side of these gouge heads which is of importance. The

A singular feature flaking, it will be observed, is of Indian gouge parallel to the edge required, heads & other This device for obtaining a clean Indian pygmies. and neat edge seems to be a peculiarity of Indian pygmies which

have undergone renders their design obvious. But the average Indian pygmy adze head is very much smaller, measuring like the Australian gouge heads only about an inch in diameter.

Indian pygmy gouges resemble the Australian gouges in the essential particular of the flat butt, and also in size as well as in shape; but made chiefly from nodules; Australians, from flakes. They are made chiefly from cores while the Australian gouges are made from flakes.

The indian gouge head has a further peculiarity—which obscures its identification considerably.

It is only rarely that it is made from a pebble chipped *ad hoc*. Exhausted cores converted into gouge heads. Most frequently the gouge head is made from a pebble that was primarily used for obtaining longitudinal flakes. At first sight the Indian gouge head resembles a disused core; and very often the gouge is made from a disused core.

(These gouges seem to have been copied from incisor teeth. To obtain the concave cutting edge the cores are flaked on the under side in a direction transverse to the flake grooves on the dorsal side).

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2. Other Types of Gouge Heads.

The flat-butted variety which has just been dealt with is much the commonest type of the adze or gouge heads to be found in pygmy camps. But some seven other varieties of adze heads are also to be met with—all of pygmy size;

1. *Shouldered adze with the tang trimmed cylindrically for mounting on a bamboo or other reed.*

2. *Tangless variety of type No. 1.*

3. *Miniature shouldered celt of Burmese type; made of gneiss (?). Length 2".*

(This type is very scarce. It may have come to the Godavari *via* the hilly regions of Western Bengal where shouldered celts occasionally occur. *Imperial Gazetteer* vol. II. Ch. II).

4. *Single shouldered gouge head.*

(The shoulder recurs in several specimens I possess and is not accidental. Other implements besides these gouge heads have a similar single shoulder and implements with similar shoulders have been found in some of the palæolithic cave dwellings of France). (*British Museum Guide*, 1902 p. 42. Figs 36 & 37).

5. *Conical-butted celt-shaped gouge heads.*

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6. *Broad and short minature celts of a gneiss (?) ground in the ordinary way.*

(These diminutive implements could not have served as axe heads but only as adze or gouge heads, and like No. 5 may have helped in the evolution of the celt.

Ground implements are of rare occurence in pygmy camps and are then usually associated with celts but the celts found in pygmy camps measure only about 2 to 3 inches in length).

7. *Gouges from natural crystals of quartz and tourmaline.*

(The finest are made from transparent hexagonal rock crystal. Black tourmaline crystals have also been used and also a heavy mineral of dull metallic lustre).

3. Other Flat-buttred Implements.

The other flat-buttred implements to be found in pygmy camps may roughly be classed under three groups.

1. *Dull-pointed implements.* In this type the butt is trimmed apparently with the object of fitting a hollow socket like a bamboo. Some of these implements have been chipped *ad hoc* like the flat-buttred gouge heads. But the majority of them have been fashioned out of cores used primarily for obtaining flakes.

(I venture to suggest that the bamboo was cut an inch or so above a joint so as to allow the flat butt of the implement to rest firmly on the septum of the bamboo while the tubular portion prevented the implement from wobbling).

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2. *Knob-headed implements.* The heads in this type are blunt and knobby while the butts are trimmed cylindrically for mounting in the same way as in the case of the dull pointed implements.

(These implements may have been used as hammer heads).

3. *Implements of pyramid type.*—These, like the others, are chiefly made from cores used primarily for obtaining flakes. Proof that the points were not accidental features is furnished by specimens in my collection of implements of which some are cores with the tips especially chipped to a point and some are mere pebbles chipped into cones. Corroborative evidence is also furnished by some pebbles big and long enough to have been used without handles which have been similarly trimmed to a pyramid point.

4. **Axe Heads.**

Trapezoid axe-heads.

The axe-heads here described seem more serviceable as weapons than as domestic tools. They do not include celts or implements which may at discretion be used either as adzes or as axes.

The commonest type of axe-head is a trapezoid with the butt parallel to the cutting edge. One side is vertical to the cutting edge while the other is at a sub-acute angle. To improve the cutting properties of the implement the edge is made to curve upwards towards the acute angle.

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(Axe-heads found in pygmy camps are not stray palæolithic implements. Their pygmy manufacture is proved by the cutting edge of several of the specimens which have been obtained by flaking in a direction parallel to the edge required).

Other Types of Axe Heads.

1. *Leaf-shaped.*

2. *A celt-like implement*, obtained by chipping to a chisel edge the base of a long flattish ovoidal pebble.

3. *A wide-edged chisel with the butt cut cylindrically as for mounting.*

4. *A rectangular implement with a chisel edge.*

(These last three types seem from their size to have been axe heads rather than adze heads although they could also have served as adze heads).

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Crescents.

The most striking of the flake implements is the crescent. Crescents are well known and are characteristic of both European and African pygmy camps; but they are not common objects. The purpose which crescents served is uncertain.

(Crescents found in the Lower Godavari are extraordinarily uniform in size, just about $\frac{3}{4}$ " \times $\frac{1}{4}$ ". This fact may give a clue to the purpose they served).

The crescent seems to be the last of a series of implements evolved out of a simple longitudinal flake.

Flakes Edged Laterally.

There is a large variety of these flakes. I have provisionally classified them into the following series:—

Series "A"—*Scalenes*.

[In this series the head of the back gradually shifts higher and becomes more and more rounded, and a rudimentary tang appears].

Series "B"—*Curved blades*.

[In these the cutting edge is gradually brought more forward and becomes curved.

The tangs are more marked].

Series "C"—*Arched backs*.

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[This series seems to have been derived from a palæolithic wood to be found in the laterite capping of flat-topped sand-stone hills on the Lower Godavari].

Series "F"—Straight narrow blades with broad points.

[The presence of a bulb of percussion at the base of some of the series and the trimming of the point show that in spite of the difference in lengths these are complete implements of the flat-butted type].

Series "G"—Straight acute pointed blades.

Series "H"—Round tipped blades.

Series "J"—Blunt tipped blades.

[Found only in one locality. Shouldered and tanged].

Series "K"—*Angled blades.*

Pointed Flakes.

Some of the implements in the preceding series have pointed flakes, but the points are subsidiary to the cutting edge. In the series now to be dealt with the points come first and the cutting edge takes second rank.

Series "L".—*Javelin heads.*

[Length about $2\frac{1}{4}$ ". Some are thinned and recessed at the butt for hafting, some tanged, some notched, and in some the point alone is sharp. In some the cutting edge has been obtained by flaking in a direction parallel to that of the edge].

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[Series "N" resembles series "L" & "M" in having no dorsal ridge and in the manner in which the cutting edges have been obtained.

The characteristic features of series "N" are square form, broad point and notch on one side. Similar notches occur also in some of the trapezoid axe-heads and at the base of some straight narrow flakes].

Series "O".—*Blunt pointed flakes.*

[The edges are thick and vertical to the face. The tip could have been used only for scraping].

Series "P".—*Arrow heads.*

[These flakes are thinner and more pointed and therefore more suitable for arrow-heads than series "M". In some the point has been obtained by secondary trimming and in some others the butt has been thinned for hafting.

The chief difficulty in identifying these implements as arrow-heads is their scarcity. If bows were in use among the pygmy-makers the scarcity of arrow-heads may be explained by assuming that the pygmy-makers used bone or bamboo for their arrow-head or perhaps

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Series "Q".—Lancet flakes.

Chisel Edged Flakes.

The position of the cutting edge in this group suggests that they are gouges or adzes, but the flakes out of which these implements are made seem too thin to have withstood the rough usage to which an adze is subjected. It is also to be remarked that not one of these flake implements is flat-butted.

Series "R".—Straight edged chisels.

Series "S".—Skew-edged chisels.

[In most implements of this type the butt is untrimmed. When trimmed, the butt is brought to a point].

Series "T".—Prismatic gouges.

[In section these are triangular prisms; but the points are abruptly thinned to a dull rounded point and the butt is untrimmed and usually turned to a side].

Series "U".—Blobbed flakes.

[The tendency of flakes is to taper to a point. The reverse at times happens and flakes expand both in width and thickness at the distal end; this is especially the case when a flake includes the base of the core from which it was struck.

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Miscellaneous Flakes.

Series "V".—Long straight flakes rounded and thinned at both ends.

Series "W".—Untrimmed long straight flakes bearing marks of usage.

Scrapers.

Any fragment of stone with an edge is good enough for the purpose of shaving and trimming wood, bone or horn. Well-defined scrapers are therefore rare. Two main types are:—

(1) *Leaf-shaped scrapers.*

(2) *Half-leaf scrapers.*

Miscellaneous Other Implements.

1. *Anvil stones.*

[These implements form another link between pygmies and palæoliths.

About a dozen were found varying in size from 3" to 6". The hollow varied in depth and was infrequently only on one side].

2. *Perforated stones.*

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3. *Hammer stones.*

[All these stones are of pygmy size not because the people who used them were pygmies but because the hammers had to be in proportion to the implements they were to manufacture. The tendency to truncate these hammers is noticeable. Was it for hafting? Some of these seem to have been used more for grinding than for hammering].

4. *Hand gouges.*

Circular & Oval Almond-Shaped Implements of Palæolithic type.

[Mostly re-chipped after rolling in the Godavari. — Scarce. Length about $1\frac{1}{4}$ "].

Hacking tools.

(The edge of this type of implement is often found to have been re-chipped and blunted again, and the back flattened probably for mounting).

Selected Stones.

[Small egg-shaped and cylindrical pebbles foreign to the locality were found in some camps. They may have been used for grinding ruddle (?)].

Ruddle and Ruddle palettes.

[Ruddle, bearing marks of grinding, were found in several camps, also one thin flat oval stone $3\frac{3}{4}$ " in length which seems to have been a palette.

In one instance the lump of ruddle was not ground on a palette but was rubbed with a small pestle, possibly one of the pebbles referred to above, until the lump became saucer-shaped on both faces].

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[In a few rare cases shale was employed. It is not clear why shale was used when so many more suitable stones were at hand].

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Antiquity of the Pygmies Found in the Valley
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Conflicting views have been expressed about the time and conditions under which pygmies were manufactured. Some archæolo-

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The difficulty in coming to a clear conclusion on the origin and date of the pygmies arises in a great measure from the extreme-

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Upper Limit of Age of the Godavari Pygmies.

Smallness in size is obviously the chief feature of the Godavari as of all other pygmy implements.

But all pygmies possess a second and more important feature, well illustrated in the Godavari pygmies; they are mostly produced by a process of neat and exceptionally skilful flaking in a parallel direction.

Smallness in size began to show itself among European implements in the second Cave Period known as the Solutric and was somewhat marked at the Madeleine or closing epoch of the Stone age. At the same time the process of parallel flaking peculiar to pygmies also began to show itself. Some French and Belgian authorities are therefore of opinion that the pygmies are merely a development of the implements used at the last cave period and have classed them as early neolithic or Tardenoisian (*British Museum Catalogue*, 1910 edition, p. 126).

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The rolled pygmies have two characteristics which distinguish them from the ordinary Godavari pygmies: they are, as a rule, of rather large size for pygmies; and, they are much more palæolithic in type. They seem to bear to the Godavari pygmies the same relationship which the Madeleine type of implements bear to European pygmies.

It is most remarkable that we should have here in India the same sequence in the evolution of pygmies as is found in Europe; a sequence which if well established would, along with the other known facts, indicate that the Indian and European pygmies were contemporaneous and passed through the same stages of evolution from the palæolithic type of implements. [It may also be possible by means of the history of the pygmies to clear the much vexed question of the age of the Indian implements of palæolithic type and show that they too were contemporaneous with the European implements of similar type.]

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The flat butt type of the Godavari pygmies seems to be one more link connecting them with the palæolithic period. India Pygmy gouges and seems to have been the home flat-butted palæoli- of the flat-butted type. In des- thic implements. cribing the Godavari pygmy axe-heads reference has already been made to their connection with a flat-butted type to be found in the palæolithic sites of Southern India, and flat-butted implements are again plentiful in one stage of the neolithic period which is to be found in Southern India but about which I cannot write. The pygmy flat butts seem to come between the palæolithic and neolithic flat butts.

Lower Limit of Age of the Godavari Pygmies.

Ground implements have been picked up in a few of the pygmy camps. These implements have already been described. They Ground implements consist chiefly of adze or gouge in pygmy camps. heads of about the same size as the agate or chert gouge heads with which they were associated. In two or three camps small celts were found and in one of these camps a shouldered celt of the

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The ground gouge heads may be early neolithic and their invention may be due to the scarcity of suitable agates for the larger

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In most camps there was no trace of pottery. Where pottery was found it was either of doubtful origin or too comminuted to

Pottery in pygmy camps.

be very instructive. But in at least three camps thick fragments of rims of large earthen vessels similar to the common funeral urns of Southern India were found. Unfortunately the fragments were so short and worn that they looked like cylinders of baked earth and their significance was missed until too late. In two other camps (Adatigala and Bopalur) round-bottomed funeral urns were found in association with pygmies.

The pottery found was very coarse and of poor baking. The larger vessels were certainly hand-made and, I believe, the smaller also were so made.

Quality of the pottery.

Pygmies in suspicious proximity to urns of a proto-historic period were found at Dowleishvaram near the apex of the Godavari delta and in Madras. Though Pygmies of proto-historic burials. pygmies, have been found occasi-

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Some indication of the age of pygmies is also derivable from the positions selected for the location of the camps and from

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flood plain of the Godavari the camps are on the platforms and saddles of the spurs that run into the river. Elsewhere the camps are almost invariably located on the ledge of a cliff of alluvial soil overlooking a stream. The implements were always on the surface of the camps or in the rain gullies that scoured them. The location of the camps shows that no great change has taken place in the configuration of the country since the time they were used. In this respect they are a great contrast to the palæolithic camps to be found in the same area which, in one way or another, always bear evidence of great antiquity.

On the facts now brought to notice I venture to express the view that the pygmy culture as represented in the Godavari had a very long duration commencing in the early neolithic period

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and extending down to comparatively recent times. This view which is based mainly on a study of pygmy types seems corroborated by the very wide distribution of pygmies in India and by the immense number to be found. I further venture to suggest that the pygmies were the implements of the now submerged negritos of India. *

APPENDIX.

A List of Pygmy Camps noticed by the author in the Valley of the Lower Godavari.

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|---|--|-----------|
| 1 Chavatti Dibbalu. | 20 Vâdapalli gandi. | |
| 2 One mile S. of Rayapalli. | 21 Pidatala gandi. | |
| 3 Another camp further South. | 22 Vadapalli village. | |
| 4 Kâmayama palem. | 23 <i>Dibba</i> W. of Kâmayaveopot. | |
| 5 Hill W. of K. | 24 Chodêsvara Konda III. | |
| 6 Yerr avaram. | 25 East Coast Ry. vol. butts. Dowleishvaram. | } Raj-my. |
| 7 Four furlongs from Pôlavaram ? | 26 Pert. Way. E. C. Ry at Sappees' Hill. | |
| 8 Dêvipatuam to Toyêru. | 27 Purushôtapatnam. | |
| 9 Sirivâka (in medi gardi). | 28 Veravaram. | |
| 10 Yerravaram Gardi. | 29 Dêvipatum (chod). | |
| 11 Pôlavaram new Taluk office. | 30 Kothûr. cherevu (copper coins and beads. no imps. ? | |
| 12 Right bank of the Yêlêm in Chavatti-Dibbalu. | 31 Toyêru S. n' Devipatnam. | |
| 13 Gandi in Têkûr and Erravaram gandi. | 32 Nela Kota I. | |
| 14 Hill S. of Kâmayama pet. | 33 Chodesvara Konda I. | |
| 15 Paidi-pâka Hill. | 34 Toyêru. | |
| 16 Near Timmapuram. | 35 Mound on Golf links cent. Jail. Rajiu T. | |
| 17 Kadama Hill, S. of Pol. | 36 Chôdesvara Korda II. | |
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MISCELLANEOUS CONTRIBUTIONS.

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BY KALIPADA MITRA, M. A., B. L.,
Principal, D. J. College, Monghyr.

The article entitled "The Little Finger" (see *ante* vol. III. p. 190 f 7) by Rai Bahadur Hira Lal reminds me of the magical significance of the little finger both in West and East Bengal. Mothers in West Bengal (districts of Burdwan and Hooghly) who have lost their children and are therefore always nervous will, before they take out a child in the open e. g., when going from one house to another in the village, spit on the bosom of the child and bite its little finger. In the districts of Nadia, Murshidabad and Rāj-sāhi (Bengal) when the son undertakes a journey somewhere the mother as a sort of protective charm bites the little finger of his left hand, touches the head with the dust of her left foot and smears the forehead with the juice of the leaves of the plant called *Nāgadana* (*Artimisia Vulgaris*). My friend, Profesor Priyagovinda Dutt, tells me that in his Subdivision (Tangail, Mymen-Singh District, East Bengal) when the cocoanut palm first blossoms and indicates an earnest of nuts, some one, in a state of ceremonial purity, scales the palm and besmears the flowers with blood taken from the little finger.

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Scape-goats to be shortly published in *J. B. O. R. S.* I am not quite sure whether the biting of the little finger is meant to propitiate or keep away evil spirits or ward off the evil eye. Besmearing the spathal flowers of the coco-palm is evidently meant to please the guardian spirit of the tree and induce it to cause the tree to bear nuts in abundance. The *nāga-danā* plant is called in Sanskrit *nāga-damanaka* or the queller of snakes. On account of its peculiar fragrance it is said to scare away snakes. It is also a popular belief that it puts to flight by its smell ghosts and evil spirits especially at night. Besmearing the forehead with its juice therefore shields a boy from the evil influence of Nāgas and Evil Spirits.

Interesting references to the little finger are to be found in the *Tales of the Punjab*.¹ The Son of the Seven Mothers, in the tale, plucked the tallest spike of rice, but heedless of the warning, yielded, as he turned homewards, to the request made in the tenderest accents by the other rice plants to pluck them, looked back, and—lo!—he was reduced to a little heap of ashes. Now the old hag “came to the heap of ashes, and knowing by her arts what it was, she took a little water, and kneading the ashes into a paste, formed it into the likeness of a man; then putting a drop of blood from her *little finger* into its mouth, she blew on it, and instantly the son of seven mothers started up as well as ever.”

¹ *The Tales of the Punjab* by Flora Aurie Steel (Macmillan & Co. Ltd., 1918), pp. 100.

Scape-goats to be shortly published in *J. B. O. R. S.* I am not quite sure whether the biting of the little finger is meant to propitiate or keep away evil spirits or ward off the evil eye. Besmearing the spathal flowers of the coco-palm is evidently meant to please the guardian spirit of the tree and induce it to cause the tree to bear nuts in abundance. The *nāga-danā* plant is called in Sanskrit *nāga-damanaka* or the queller of snakes. On account of its peculiar fragrance it is said to scare away snakes. It is also a popular belief that it puts to flight by its smell ghosts and evil spirits especially at night. Besmearing the forehead with its juice therefore shields a boy from the evil influence of Nāgas and Evil Spirits.

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Elsewhere in the *Tales* of the Two Brothers a little finger is offered in lieu of a human sacrifice.² A fleet of merchant vessels, detained by calms in the harbour, would not move unless, as the augurs declared, a human sacrifice was made.³ "The Prince was handed over to the merchants, who taking him on board their ships, prepared to kill him. However, he begged and prayed them so hard to wait till evening, on the chance of a breeze coming up, that they consented to wait till sunset. Then, when none came, the Prince took a knife and made a tiny cut on his *little finger*. As the first drop of blood blowed forth, the sails of the first ship filled with wind, and she glided swiftly out of harbour; at the second drop, the second ship did likewise, and so on till the whole fleet were sailing before a strong breeze."

Ratzel tells us that "in Tonga when the King's mother died the chiefs descended from her branded their temples, and at the death of the high priest it was usual to cut off a joint of the *little finger*."⁴

² *Ibid*, pp. 138, 139.

³ Cf. the story of the sacrifice of Agamemnon's eldest daughter, Iphigenia, to move the Greek fleet at Aulis and her mysterious disappearance and the substitution of the milkwhite fawn by Artemis.

⁴ Ratzel—*History of Mankind*, Vol. i, p. 330. Cf. the Bushman and Australian practice of cutting off fingers and their joints; also that noticed in the Aurignacian cave-paintings; See also J. B. O. R. S. Vol. IV. p. 302; Sollas's *Ancient Hunters*.

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II. A NOTE ON THE FOXES' WEDDING.

BY K. P. MITRA, M. A., B. L.

While reading the "Tales of Old Japan" I came across the following passage:—"When the ceremonies had been concluded, an auspicious day was chosen for the bride to go to her husband's house, and she was carried off in solemn procession *during a shower of rain, the sun shining all the while.*"

It is a strange coincidence that in Western Bengal, Eastern Bengal, Bihar and Malabar the same sort of belief should exist among the common people. During a shower of rain, the sun shining the while, I have heard little boys lustily shouting and singing the doggerel,—

(i) *Rōd hachchhē jal hachchhē.*

Khenksiālir biyē hachchhē, (Hughli, Bardwan and Howrah).

(ii) *Rōdē rōdē jal hai,*

Siāl Siālir biyē hai. (Birbhum).

i. e., The sun doth shine, while doth it rain.

The fox his winsome bride doth gain.

(iii) Or, *Rōd hachchhē jal hachchhē.*

Siāl kukurer biyē hachchhē.

i. e.,—The Sun doth shine, while it doth rain,
The fox and bitch do wed the twain.

(iv) *Siālē biyā karē chhātī murāy diyā.*

Aiyorā pān khāi diyā.

(Mymensing).

i. e., the fox weds with an umbrella on his head
and the women whose husbands are living eat *pān*.

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In Bihar also the boys shout likewise at the time:—

(v) *Gidhar gidharni biyā hoi.*

(vi) *Giddrā gidhrise biyā bhel.*

There must be some corresponding folk-poetry ; I have got one, but that is not quite relevant though it has a curious resemblance to a Bengali folk-poetry exhorting the Sun to appear while he is tardy.

It may be that in other parts of India such belief may exist, and folk-poetry embodying it may be heard. Is this coincidence merely accidental? And why should such a phenomenon as rain being accompanied by sunshine be at all associated with the fox's wedding in so widely separated countries as India and Japan? Or does it in any way, however mysterious and now inexplicable, point to some culture-contact?

Lord Redesdale says in the foot-note—"A shower during sunshine, which we call the "Devil beating his wife" is called in Japan "the fox's bride going to her husband's house." It is very difficult to explain why the Devil should beat his wife, unless it be that the Devil has some connexion with German *Donner*, Old Norse *Donar*, meaning Thunder, and therefore associated with rain and *striking* of thunder.

In compelling rain the pagan Arabs tied *cabstropis procera* to the tails of cows, set fire to them and drove them to the mountains. Mr. S. C. Mitra recalls "the very curious ceremony"

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in connection with the Roman festival of *Cerebia* of "the tying-ap of burning fire-brands to the tails of foxes," to compel sunshine and its continuance.²

The burning of fire-brand may perhaps be associated with hymeneal torches (in this case by the bridegroom himself!) as well as sunshine when the rain has almost ceased. There is still a 'but'. Will some kind reader explain?

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III. A MIRAGE OR A FRAUD?

By K. P. MITRA, M. A., B. L.

A gentlemen at Monghyr related to me a Story of a complacent ghost seen in broad daylight. One Sitar Singh of village Sitalpur (Monghyr) had some business to go to the *Taufir dearah* of the Ganges about four miles from Monghyr town. He had to cross a wide tract of sand in reaching his destination. As he was nearing it, it suddenly occurred to him that he had left behind at his house some important document without which his journey would have been taken in vain. So he immediately retraced his steps homeward. It was about noon in April-May, and the Sun was mercilessly pouring down its molten rays on the sand. He was wending his way with some difficulty when suddenly looking forward he discovered four other men a little ahead of him treading on the sand, each, like him, holding an umbrella in his hand. He was delighted to have some company at least and tried to overtake them, which he did, of course, after some time. But instead of coming nearer home he was going farther away from it. For these figures were moving towards Sirimatpur and making apparently for the Monghyr side. They did not talk to him, but were conversing amongst themselves. ¹ Said one with a knowing look to the other, "Hallo, make him one of our company". Make him one of their company! Why, he was their companion already. What the devil could it mean?

¹ Cf. Burns's *Tam-o-Shanter*,—of course under very different circumstances.

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Sitaram could even hear and count the throbbings of his heart, for was it not beating pit-a-pat? He was lost! Well, he—a wise man—kept his counsel. Meanwhile the weird conversation (apparently without any respect for the feelings of Sitaram) streamed on.

Replied the second figure,—“The idea! What good? We are merry already and can do without further population.”

Struck in another,—“But the more the merrier!”

“No good, no good,” said the fourth with a nod of disapproval; “The ill-favoured fellow! He will spoil all our mirth. Don’t kill him. Let him go home.”

So Sitaram was let go, and he did not know what happened to him meanwhile. He discovered himself at 4 P. M. in his house at Sitalpur. Since then he kept himself to his house for a fortnight. He would not step outside alone. He would never cross the Taufir *Dearah*. It is now taboo to him. Whenever he has business at the Taufir Cutchery he would reach it by a circuitous path, coming by railway and describing a respectable circumference. My informant was surprised to see him coming by rail and enquired about the etiology of this novel route. He unfolded it and even undertook to demonstrate it. “Sir,” said he, “you may see it even now; attach some strong rope to my legs and let me proceed to the *dhāp*.² While I am on the other side, I

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shall be dragged by mysterious forces, as you will perceive by the rope proceeding at more than ordinary human rate. Please be good enough to drag me behind." Evidently he proposed to resort to this contrivance to prevent him from enjoying the delectable company of his erstwhile *camarades*! My friend rudely cut him off in his spiritual sailings and shocked him by attributing all these vapourings to some extra *chilums* of *gāñja* ³ (*Cannabis Indica*) and disdained to heed his proposal of the 'Kindergarten' demonstration.

The fact however remains that the man has no mental aberration excepting what has been related, attends to his ordinary business with ordinary sagacity as before; in all other respects he is the ordinary man he used to be. But then he is mortally afraid of being alone, and would never for the life of him cross the desert sand of Taufir. He smokes no *gañja* or other intoxicating drugs which can make him 'see', as the mephitric exhalations from under the tripod made the Pythea "seeing" and "oracular". One explanation occurs to me. It is a case of the blending of normal with supra-normal vision. It appears that this man is peculiarly susceptible to ghostly impressions. Spirits are a reality to him, as to many others here and elsewhere. (I shall presently relate two cases of my own experience). This natural susceptibility gets a keen edge when whetted on by natural phenomena (not natural

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to all, though!) such as a mirage. Now the Taufir *dearah* is sand, sand, sand, all round for a stretch of about 5 miles. The midday sun beating on the sand provided the necessary apparatus by creating the different media of rarefied air for the manufacture of mirage. It is noteworthy that Sitaram saw all the four figures treading on sand, and holding, like him, an umbrella in hand. Whether quadruple image can be formed in a mirage it is for the physicists to tell. Now Sitaram saw the mirage. The heat of the Sun moreover caused fatigue in the brain and probably induced hyperasthesia of vision or a sort of clairvoyance. He was in a sort of "sleeping wakefulness" or "waking somnolence", an "inert-active" state—an ideal condition for producing sensations like those one experiences in an incubus or night-mare. I may perhaps with more propriety allude to imaginings experienced by one who has been drowned. Professor A. T. Mukerjee of Patna Collage related to me his experiences of imaginings, dreamings—not inert—while he was drowned. Doctors also say the same thing, though these experiences are said to be very sweet and delightful, unlike, as in the case of Sitaram, the cruel method of killing a companion. Sitaram heard (?) the reflections of his own hyper-sensitive mind in the ghostly conversation. He thought himself dragged towards Monghyr side. And why? The idea of *Chandisthāna* ⁴ may have persisted in

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From the attitude of Sitaram and his relations to the powerful Naib it does not appear he was getting a fun out of a fraud.

Now about the cases of my own experience. In September 1919 I was occupying a room of the College Hostel, for I had to send away my family on account of my father's death. One night at about eleven I was startled by some screaming. I called out, but none replied. I rose with difficulty for I was very weak on account of illness for sometime, and proceeded to the room whence the noise was coming. I found there a man, haggard looking, all skin and bone and with hairs gadding about, in the firm grip of two students. Now, the room where the occurrence took place is just on the ordinary path and easily accessible. There were three occupants of the room. One was sleeping; the two other were at their desks preparing for the examination usually held before the Pujahs. The one was dozing; the other was awake: and none heeded when the apparition had entered right into the midst of the room. At a slight sound the boy turned and found a ghost just in front him and yelled. This was echoed back by the dozing student. The sleeper who had meanwhile awakened thought it wiser to hug his bed, and show his good intention to the ghost that he was none of the matter. In the adjoining room another student named Ram Jaram with strong and stout limbs, (above 25 years at least)—but alas! with no strong heart,—

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groped in the dark to the bedside of his chum and catching hold of him began to quake (*thartharātē thē*). All the four did not doubt that it was a ghost. Fortunately there were other students who were more courageous. Without being able to determine whether the man was actually demented, or he malingered, or was a prospective or retrospective thief (of the *chhiñchke* [छिचके]), kidney I locked him up for the night and made him over to the police in the morning.

About a year ago, a student, named Ramagovind, came to inform me that the case of a student named Raghuvanshi Sahay had, indeed, become very bad, and that his extremities were growing cold. I saw Raghuvanshi quite whole in the morning and the news naturally alarmed me. I came immediately to the room. The boy was lying senseless, but mostly kicking, throwing forward his hands and otherwise making violent movements punctuated with groanings and ejaculations. I thought it was epilepsy. I managed to quiet him for a while and felt his extremities; they might have been cold, but they were warm at the time. The boys were not found to be fully alive to the gravity of the situation, but with a provoking unconcern were dogmatising that it was a veritable case of spirit-possession and therefore needed the attention of a spirit-doctor more than one who went without that ornamental prefix. Though the subject was charming I had no time to lose for I was naturally very anxious and immediately made

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off on my bicycle at break-neck speed for the doctor—who lived in the town, about 3 miles from the College. After some search I could discover him taking his evening walk in the field opposite the courts. Notwithstanding the protests of the coachman that the jaded horse could no longer draw I literally kidnapped the doctor to the hostel that night. The boy became all right in two days.

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ANTHROPOLOGICAL NOTES AND NEWS.

The eleventh annual meeting of the Indian Science Congress held its sittings at Bangalore from the 14th January to the 19th January last. The Presidential address to the Anthropological section was delivered by Rao Bahadur A. K. Iyer, B. A., the subject of the address being, "The Study of Anthropology". Abstracts of the papers presented to the Anthropological section of the Congress are given below:—

(1) *Pygmy Implements from the Lower Godavari.*—
By L. A. Camiade.

Introduction.

Pygmy implements have been discovered in many parts of Asia, Europe and Africa, but up to date little is known of their origin or of their date.

The implements recorded hitherto are all flakes and the flakes are of only 4 or 5 rather obscure types.

The backwardness of knowledge concerning the origin and use of pygmies is due to the scantiness of pygmy camps in Europe and the paucity of types found in those camps.

India is rich in pygmy camps but they have not been closely studied.

Part I.

Types of the Godavari pygmies.

In the valley of the Godavari over 100 pygmy camps were explored. They disclosed a complete range of well-made implements, all of dwarf size,

ANTHROPOLOGICAL NOTES AND NEWS.

The eleventh annual meeting of the Indian Science Congress held its sittings at Bangalore from the 14th January to the 19th January last. The Presidential address to the Anthropological section was delivered by Rao Bahadur A. K. Iyer, B. A., the subject of the address being, "The Study of Anthropology". Abstracts of the papers presented to the Anthropological section of the Congress are given below:—

(1) *Pygmy Implements from the Lower Godavari.*—
By L. A. Camiade.

Introduction.

Pygmy implements have been discovered in many parts of Asia, Europe and Africa, but up to date little is known of their origin or of their date.

The implements recorded hitherto are all flakes and the flakes are of only 4 or 5 rather obscure types.

The backwardness of knowledge concerning the origin and use of pygmies is due to the scantiness of pygmy camps in Europe and the paucity of types found in those camps.

India is rich in pygmy camps but they have not been closely studied.

Part I.

Types of the Godavari pygmies.

In the valley of the Godavari over 100 pygmy camps were explored. They disclosed a complete range of well-made implements, all of dwarf size,

including adzes, axes, gouges, a large variety of specialized cutting, boring and chiselling implements, besides hammer-stones, anvils and grinders.

Part II.

Age of the Godavari pygmies.

The range of implements found show that the pygmies are not a mere side industry of some stage of stone culture but a complete cultural stage.

In shape, size and technique these implements have affinities with the last palæolithic period and seem to be early neolithic.

This is an opinion which has already been expressed in regard to pygmies found in France and Belgium. The Godavari pygmies seem to corroborate this view very fully.

A later neolithic age seems however to be suggested by the situation of the pygmy camps, as well as by the position of the implements in the camps and by the occasional occurrence of pottery and of ground implements.

A still later date is suggested by the occurrence of pygmies in intimate association with urn burials.

And pygmies seem to have been associated even with proto-historic burials.

It is possible that the pygmy culture in the Godavari valley, if not in India generally, had a long duration and pygmies may have been the implements of the now submerged negritos of India. The pygmies of Southern India bear a very close resemblance to those of South Africa.

(2) *On the Cult of the Jujube Tree.*—By
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(2) *On the Cult of the Jujube Tree.*—By
S. C. Mitra.

A godling named Ito-kumara or Ishto-kumara, who is believed to preside over matrimony, is worshipped by unmarried girls in the district of Pabna in Eastern Bengal and in some parts of the district of Nadiya in Central Bengal. The maidens worship him for obtaining the boon that they may get married soon. His worship is strictly prohibited to married girls. This godling is believed to be immanent in the jujube tree (*Zizyphus jujuba*). For this reason, no anthropomorphic image is made of this godling who is symbolized by a branch of this tree. The branch of the jujube-tree is worshipped by unmarried girls with offerings of wild flowers and to the accompaniment of the recital of *mantras* or charm-formulæ of which the main constituent elements are—(a) entreaty, and (b) the description of the imaginary occurrence of certain events in the godling's own life which is believed to result in the speedy happening of similar events in the worshippers' lives. This "Cult of the Jujube-tree" is a striking illustration of the doctrine of Animism.

3. *On a Meithei Apologue and its Bengali Variant.*—By S. C. Mitra.

There is current among the Meitheis of the Valley of Manipur an apologue or "a story with a conscious purpose and a moral" which illustrates the truth of the saying that 'cunning is outwitted by cunning'. The Bengalis appear to have borrowed this apologue from the Meitheis and,

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after giving it a local colouring and fitting it into a Bengali framework, assimilated it as their own. The following story radical, which fits into the Meithei and Bengali versions, has been framed :—

- (1) A person dies leaving a milk-yielding beast, a fruit-bearing tree and a textile fabric.
- (2) One of his two sons, who is more cunning than the other, defrauds the other by giving the latter the unproductive parts of the beast and the tree and by compelling the latter to keep the textile fabric during the day-time.
- (3) The simpleton brother, on the advice of others, outwits his cunning brother by trickery.
- (4) Thereafter each takes his half-share of the products of the beast and the tree, and uses the textile fabric alternately or divides the sale-proceeds thereof equally.

4. *Note on a Tamil Cumulative Folktale of the Old Dame Lousy Type.*—By S. C. Mitra.

In view of the discovery of this new Tamil variant, the story-radical, which the author has framed for the Cumulative Folktales of the "Old Dame Lousy Type," has been modified as follows :—

- (1) The heroine of the tale, whose name is Dame Lousy, or *who is the queen of the rats, dies.*
- (2) Thereupon a bird, in order to give vent to his grief at her death, fasts for several days. Or, *the rat-queen's husband sits sorrow-stricken under a tree.*

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(3) Thereafter some calamity or distressing incident happens to the other actors in the tale, or *the other actors throw away or break something in order to give vent to their grief.*

(4) In one case, some of the latter actors are extricated out of their distressful situations.

5. *Note on a Recent Instance of the Folk-belief that the Water-Goddess Demands Human Sacrifices.—By S. C. Mitra.*

There is a belief current among the common folk of Southern Bengal that the goddess presiding over a tank demands human sacrifices. An instance of this belief, which has recently cropped up in the village of South Barasat in the district of 24-Parganas in Southern Bengal, has been described in this paper.

6. *Crab folklore.—By S. T. Moses.*

The crab in astronomy, a constellation and a sign in the Zodiac.—Western mythological account of its presence there.—The sign is so called as the Sun makes a crab-like sidelong motion after reaching the Cancer.—Æsop's fable regarding crab's gait.—*Kadaga Sankaranthi* or Summer solstice.

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The crab in some South Indian proverbs.

7. *Notes on a type of sedentary game prevalent in many parts of India—By Hem Ch. Das-Gupta.*

In this paper the author has described a type of sedentary games prevalent in many parts of India and usually played on a plank in which a number of shallow holes has been scooped out and the holes are filled up with small pieces of stones, cowries, tamarind seeds, etc. The game is known as *Máwkárkátiyá* (among the Khasia), *Vain lung thlan* (among the Lushais), *Kánji quit* (among the Oriyas), *Ománguntá peetá* (among the Telugu-speaking people) and *Pálánguli* (among the Tamil-speaking people).

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8. *Indian concepts about Man's place in Nature.—*

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10. *Marriage Customs among the Muduvans of Travancore.*—By L. A. Krishna Iyer.

The Muduvans of Travancore are an interesting hill tribe found on the Cardamum Hills bordering the district of Madura and in the Neriamangalam Valley.

Marriage generally takes place after puberty, and that between cross-cousins, *i. e.*, between the children of brother and sister is preferred. The presentation of a cerub made of bamboo or reed forms an essential part of the marriage ceremony. Something resembling 'marriage by capture' is also in vogue among the Muduvans. Re-marriage of widows is permitted.

The Muduvans afford an example of 'happiness without culture,' and show signs of progressiveness with the march of civilisation.

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13. *Suggestions for the Classification of Indian Pottery.*—By F. J. Richards.

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14. *The Baby Language among the Parsees.*—

By Dr. Jivanji Jamshedji Modi.

Babies among all people seem to have two kinds of languages. The one is the kind of mute language which they utter both in their smiles and cries. It is the language referred to in the New Testament as “out of the mouth of babes and sucklings thou hast perfected praise” (*Math.* xxi). The second is that which babies speak when they begin to prate. They learn it from their mother’s lap. The author then gives a number of words uttered by Parsee babies in their first attempts.

15. *The Antiquity of the Custom of Suttee.*—

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Dr. J. Egging in his articles on “Brahmanism” on and “Suttee” in the *Encyclopaedia Britannica* says that the custom “seems to have sprung up originally as a local habit among the Kshatriyas, and on becoming more and more prevalent to have at length received Brahmanical sanction” The object of the paper is to show that the custom (a) was not confined to India and (b) was very ancient.

The fact that classical writers like Diodorus, Seculus and Strabo refer to it shows that the custom was prevalent long before the Christian era. Diodorus who travelled in Asia and lived in the first century B. C. refers to a case of *suttee* in the camp of ~~Elamenses~~, the Private Secretary

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of Philip of Macedon and his son Alexander. Strabo (B. C. 54—A. C. 24) on the authority of Artistobulus who accompanied Alexander the Great to India refers to wives burning themselves voluntarily with their deceased husbands.

Again the custom was not confined to India. It also prevailed among other people of the old Indo-Germanic stock. Herodotus refers to the custom among the ancient Thracians. Tacitus refers to the prevalence of the custom among the Winedi, an old German tribe. Masoudi, an Arab writer, describes the custom as prevalent in a Caucasus tribe. Yule refers to some countries other than India where the custom was prevalent.

The motive of the custom is attributed by some scholars to a particular belief about future life among primitive people viz., that some material wants were felt by the dead in the other world, and so with other things women had to be sacrificed to supply such wants. That may be so elsewhere, but in India the motive seems to be suggested by the high ideal of love and affection among some wives. The Parsee view of performing the funeral ceremonies in double suggests a high ideal of wifehood.

A somewhat similar custom seems to have prevailed even in old England. Some recent excavations in England point to that fact and confirm what is said above; Tacitus said that "the pagan Saxon wives slew themselves when their husbands died."

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16. *The theory of migration from India.*—By
J. H. Hutton.

The theory of migration from India would be expected to account for a certain similarity between the cultured pre-Hindu tribes and of the Pacific Islanders, but the similarity is closer in the case of the Naga tribes than has been hitherto realized. This is exemplified by the similarity in the use of stone and in the practices and beliefs connected with death. There are indications to show that these cultures reached Assam from the south and as the result of some trans-marine migration, so that the centre of dispersal was perhaps Indonesia rather than India.

17. *Baigas of the Central Provinces.*—By Rai
Bahadur Hiralal.

A tribe without distinctive language—Some of its characteristics—Probable connection with the Vadagas of the South.

18. *The Kurumbas of the Madras Presidency.*—By
T. J. Kumaraswami.

- [1] Their population according to 1921 Census—
[2] Their greatness during the days of the Pallavas—
[3] Their administration and the power of their assemblies—A. Their cairns, barrows, azarams, kistavens cromlechs—[4] Their physical characteristics—[5] Their houses—[6] The various divisions among them—[7] Their religion—[8] Their customs and manners—[9] Their occupation.

19. *The Future of Ethnographic Research in India.*—By C. H. Rao.

Present state of research work in Ethnography—Work accomplished so far—What remains to be

16. *The theory of migration from India.*—By
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The theory of migration from India would be expected to account for a certain similarity between the cultured pre-Hindu tribes and of the Pacific Islanders, but the similarity is closer in the case of the Naga tribes than has been hitherto realized. This is exemplified by the similarity in the use of stone and in the practices and beliefs connected with death. There are indications to show that these cultures reached Assam from the south and as the result of some trans-marine migration, so that the centre of dispersal was perhaps Indonesia rather than India.

17. *Baigas of the Central Provinces.*—By Rai
Bahadur Hiralal.

A tribe without distinctive language—Some of its characteristics—Probable connection with the Vadagas of the South.

18. *The Kurumbas of the Madras Presidency.*—By
T. J. Kumaraswami.

- [1] Their population according to 1921 Census—
[2] Their greatness during the days of the Pallavas—
[3] Their administration and the power of their assemblies—A. Their cairns, barrows, azarams, kistavens cromlechs—[4] Their physical characteristics—[5] Their houses—[6] The various divisions among them—[7] Their religion—[8] Their customs and manners—[9] Their occupation.

19. *The Future of Ethnographic Research in India.*—By C. H. Rao.

Present state of research work in Ethnography—
Work accomplished so far—What remains to be

done in regard to Anthropometry, and in regard to origin of Caste—Further study of selected Castes and tribes—Other main heads of research—Extent of Mother Right in India.—Study of Family and kinship systems on the classificatory and genealogical systems—Study of the Evolution of Handicrafts—The study of place—names and proper names—Linguistics from the somatological point of view—Organization of a society India for the study of fossil man and primitive man in India—Founding of a Bureau of Anthropology in India under the ægis of the Ethnographic section of the Congress—Details about the proposed Bureau—Advantages to be derived from it.

20. *An American Tribe and its Buffalo, and an Asiatic Tribe and its Fish.*—By Dr. Jivanji Jamshedji Modi.

The author compares the eating, dressing and living habits of some American tribes like the Algonquins on the Mississippi, referred to by Mr. Bushnell the Bulletin No. 77 of the Smithsonian Institution and Bureau of American Ethnology, with the Asiatic tribe of the Ichthiophagy on the coast of Makran, referred to by classical writers like Arrian, Strabo and Curtius Rufus. These tribes illustrate the fact that the physical and other conditions of people depend, to some extent, upon their environments which affect the questions of their heritage of food, dress and dwellings,—questions which are influenced by what is called the "Bread and Butter Theory" referred to by Mr. E. Huntington in his "Pulse of Asia." The

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American tribes lived on the buffalo, dwelt in dwellings made of the hides of the buffalo and dressed themselves in skins of the buffalo. Similarly the Asiatic tribe lived on fish, dwelt in houses made of the bones and scales of fish and dressed themselves in the skin of the fish. Fish-bread was their staple food and grain which grew there very little was used merely as a little relish with the fish-bread. Water also, being rare, was drunk once every five days at some distant watering places where families went with songs and rejoicings and drank "throwing themselves on their faces as beasts until their stomachs were distended like drums." Firdousi and Diodorus Seculus refer to the enormous size of the fish on the Makran coast which surprised the Greek soldiers of Alexander the Great as it surprised the Persian soldiers of King Kaikhosru of Persia.

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of Impurity, from a person infected by coming into contact with a dead body, wherein the various parts of the body are similarly spoken of as those down which the Nasu passes from the head downward.

The following table gives a glimpse of the order of exorcism in the Indian (Chota Nagpur) and Iranian processes :—

<i>Indian. (Chota Nagpur)</i>	<i>Iranian.</i>
From Hair to the	
Head	Head
Forehead	Forehead
Eyes	The hind parts of the head
Nose	Cheeks
Mouth	Right ear
Teeth	Left ear
Tongue	Right shoulder
Lips	Left shoulder
Neck	Right arm-pit
Shoulders	Left arm-pit
Chest	Upper part of the breast
Waist	or chest
Thigh	Back
Leg	Right Breast
Ankles	Right rib
Heels	Left rib
Soles of the feet	Right buttock
Toes of the feet	Left buttock
Toe .nails down to the	Abdomen
earth.	Right thigh
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	Right knee

*Indian. (Chota Nagpur)**Iranian.*

Left knee

Right calf of the leg

Left calf of the leg

Right ankle of the foot

Left ankle of the foot

Right instep

Left instep

The sole of the right foot

The sole of the left foot

Toe of the right foot

Toe of the left foot.

Most of the parts of the body in both are common. The Vendidad purifier of Iran leaves aside the arms and makes the physical impurity pass, as it were, in one line from up to down below. But the Indian spirit doctor attends to these side portions also. Again in the Vendidad the right and the left parts of the body are treated separately. The Vendidad in the end lets the impurity pass to the North which was, according to the Iranians, the seat of all evils. The Chota Nagpuris let the spirit pass in the end to the Earth which is "its proper habitation." Among both, the patients return to the normal state of health after the treatment.

22. The Root-idea at the Bottom of Nudity-Spells.—By Dr. Jivanji Jamshedji Modi.

Mr. Sarat Chandra Mitra in his recent paper entitled "A Recent case of the Use of Nudity-spell for rain-making in Northern Bengal" and Mr. Crooke in his "Popular Religion and Folk-lore of Northern India" refer to customs wherein

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Right ankle of the foot

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women, at times of scarcity of rain strip themselves naked and dance before the rain-god. Both the learned authors say the root-idea at the bottom of the custom seems to be to frighten the god to force him to pour down rain. Dr. Modi suggests the following ideas as well: (a) An appeal to the rain-god, as suggested by Mr. Conway on the ground of poverty and inability. (b) Temptation to allure the rain god who is supposed to possess passions and desires like women. (c) An expression of humility like that expressed by a candidate for invitation in masonry, who appears before the master, as it were, in a kind of half nudity, having parted with his upper garments and his money, even all metallic things like his keys, spectacles which may count for money, however little. (d) Shaming the rain-god and thus forcing him to pour forth rain. This view is illustrated by the story of Cyrus the Great of Persia related by some classical writers like Strabo wherein the Persian women went before their male soldiers who were running away from the battle with the Assyrian soldiers of Astygis towards their capital city of Pasargadae (modern Murghab). The women exposed their sexual parts and pointing towards them put the flying soldiers to shame and forced them to go back to the battle-field and fight for their country. The result was a victory for the Persians. All future kings whenever they went to the city always gave a silver coin to every woman there to commemorate the above event. (e) The idea of self-surrender or sacrifice which lies at the bottom of many modern

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practices of salutation. Here the women offered to surrender or sacrifice what was most dear to them, viz. their high sentiments of decency. The case of the women of ancient Babylon illustrates this. According to Herodotus every native woman of Babylon was obliged, once in her life, to sit in the temple of Venus and have sexual intercourse with any stranger who gave her a silver coin which she could not reject however small it might be. "When she has had intercourse and has absolved herself from her obligation to the goddess she returns home and after that time however great a sum you may give her you will not gain possession of her." In this case, the women offer to their god what is most dear to them, viz. their chastity.

Many a custom passes from the Church to the State or to Society. Occasionally we hear that in modern Parliamentary elections, a lady, on behalf of her candidate, to gain the favour of the voter, who then is, as it were, her temporary god, gives to the voter a kiss, thus sacrificing her modesty. During his visit to Japan in 1922, Dr. Modi saw in the temple of Hegoshi Hingwa large heaps of the hair of 4000 women of Japan which they had offered to the temple to from ropes to help the work of reconstruction of the temple. Here the Japanese women offered what was most dear to them, that which gave them beauty, their hair. The occasional instances we hear of women giving the right of the first night to some high priests who pose as the representatives of gods in this world, illustrate the above views.

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INDIAN ETHNOLOGY IN CURRENT PERIODICAL LITERATURE.

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of observances is clearly marked in the variances of the festival. The complex includes ancestor-worship, snake worship, a parrot cult, reverence paid by artisans to the tools of their craft and by pastoral tribes to their cattle, the starting of work or enterprises, gambling, and so on. "All these are, in their varied forms, connected with the primary object of the rites—the securing of good luck, the expulsion of evil—a complex of magical methods which are thus grouped together at the equinoxes."

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and institutions of the Aryans themselves. In the process of adjustment that followed, 'shape was given to the institution by the needs and predilections of each community': Among these the dominant principle was the hankering after sons, sons being regarded as exceedingly valuable possessions, and thus the early *Dharmasāstras* "exploited all the possibilities of child-bearing women". But the almost wild license permitted in the early *Dharmasāstras* is curbed by the later law-books of Vishnu, Manu, Nārada, and others which only permit a widow to have intercourse with a *devara* or a *sapinda* or other kinsman under very rigorous conditions. "This synthesis was probably made possible by the fact that the imperative need for plenty of male offspring had considerably decreased in society". After briefly discussing the evolution of various forms of sonship in ancient India, from the *Aurasa* to the *Khettraja*, *Putrika*, and *Paunarbhava*, which are all offsprings of the family, Dr. Sen-Gupta refers to the *Kānina*, *Sahodha*, and *gudhaja* or *gudhotpanna* sons who are all children born in the house, and affiliated to the head of the house, to the different varieties of adopted sons such as the *Dattaka*, *Kṛita*, *Kṛittima*, *Swayamdatta* and *apaviddha*. The history of evolution of these various kinds of sons (except adopted sons which do not go back to a very remote antiquity) recognized by the Hindu law books is a history of the theory of ownership in sons. The law books frequently refer in this connection to the analogy to the produce of a field which belongs to the

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REVIEWS OF BOOKS.

Psychology and Primitive Culture:—*By F. C. Bartlett, M. A., Reader in Experimental Psychology, University of Cambridge. PP. 294+IX (Cambridge University Press): Price 8 s. 6 d.*

As the author has pointed out in the preface, the book falls into three parts, the first in which the principles to be used by the psychologist are formulated, the second in which certain outstanding problems of primitive culture are discussed, and the third in which it is indicated how the use of these principles have to be modified as the subject of treatment changes from the culture of primitive people to modern civilization.

In the first part, the author sets out the problem before the investigator of primitive culture, namely, the determination of the main tendencies towards behaviour, feeling and cognition as these are expressed in primitive society, their relation to one another, and the modifications they undergo in the course of development. As the starting point of his analysis, the author takes McDougall's list of instincts and tendencies (as set out in his *Introduction to Social Psychology*). The instincts and innate tendencies which are specifically social are picked out and the dependence of their response on the prevailing forms of fundamental social relationship is discussed. Three forms of relationship are discriminated,—that of equals, that

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of superiors to inferiors, and *vice versa*. Stress is laid also on the numerous specific tendencies which cluster round various social groups.

In the second part, the author takes up the analysis of the folk-tale as a social product and passes on to the study of conflict of tendencies and their mutual reinforcement. The psychological study of the contact of peoples is next taken up, leading to a discussion of the two principal modes of spread of culture—viz.—borrowing (by which the author understands the transmission of culture through the personal influence of some important individual or individuals) and diffusion, through the existence of immediately practical or instinctive needs of certain elements in the alien culture. This naturally leads to the question of cultural pattern and elaboration of culture. The treatment adopted leads to the conclusion that a further study of the culture of primitive peoples can be rendered possible only by the intensive study of particular communities.

In the last two chapters, which in fact constitute the third part of the book, the author indicates the essential sameness of the general psychological factors in modern civilization and primitive culture and attempts a very brief criticism of Levy Bruhl's theories of primitive mentality.

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taken in a properly cautious and scientific spirit and emphasis is justly laid on the necessity of cultivating a "monographic attitude" for the proper comprehension of the psychology of any particular people. The author has however attempted to pack too much material into too small a compass, and has also relied (in pursuance of his monographic attitude) too largely on data drawn from a small number of studies. The result has been an admittedly inadequate treatment of many points and also a lack of general validity of some of the conclusions drawn. Thus, in the case of the folk story, Mr. Bartlett reaches the conclusion that the tendency to provoke laughter and astonishment is specially prominent (pp. 86-7) on account of the influence of the social group upon the narrator. An examination of our Indian folk-tales however does not lead to the same conclusions, and if the comparatively advanced counterpart of the story-teller—the Indian *Kathak*—is taken as an example, stress will have to be laid on the tendency to arouse pity for the sufferings of the hero (or heroine). As Mr. Bartlett has himself insisted, the folk story is a social product, and the story-teller has to respond to the social environment,—and this may vary from people to people.

As an example of Mr. Bartlett's tendency to lay undue emphasis on American data, may be pointed out the illustration chosen to indicate the selective nature of the conserving tendency. Mr. Bartlett cites the survival of the terminology of

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With the limitations pointed out, Mr. Bartlett's book is a work of undoubted scientific value and should be welcomed by all workers in the domain of cultural anthropology.

K. P. Chattopadhyaya.

Early Civilization. An Introduction to Anthropology. *By Alexander A. Goldenweiser.* [New York: Alfred. A. Knopf, 1923 (third printing)] PP. 428.

The book under review is an excellent elementary text-book for the beginner in anthropology. After a short critical introduction in which the author deals with the Unity of Man, the Nature of Civilization, and a criticism of the Evolutionary theory of culture, he proceeds in Part I to give concrete illustrations of Early Civilization, from five selected primitive communities. One particular aspect of civilization has been chosen in each case for somewhat more careful treatment on account of the suggestiveness or theoretical importance of that aspect. Thus, decorative art is

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given prominence in dealing with the Thlingits and the Haidas of North-west America; economic and industrial adjustments to environmental conditions are stressed in his account of the Eskimo; the socio-political system of the Iroquois is treated somewhat more minutely with special emphasis on the great prominence of women in this group; in the account of the Australian tribes emphasis is laid upon their magical beliefs and practices; and the Baganda tribe of Africa is represented as a type of Negro State Organization. These five early civilizations, the author shows, display the static and dynamic characters which are encountered in every organized human society. From an analysis of these five primitive civilizations, the author shows how—*“every local civilization is in certain respects like all civilizations, in certain others, like all primitive civilization; then it is like the civilization of certain very large geographical areas, continental in their sweep; it is further like the civilization of a more restricted area; and finally, it is like unto itself, in certain local peculiarities, individual and unique”*. (P. 123).

From the same complex analysis our author disengages two fundamental processes which are omnipresent and which alone can account for the distribution of such cultural features as religion, art, social and political organization, industries, economic pursuits and ideas. These processes are:—

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spread of such features in the course of the historic contact of tribes". (P. 124).

From the impracticability of squeezing these five civilizations into an evolutionary series, the following conclusions are drawn: (1) "The historic fates of the five groups have evidently been individual and particular and have driven them in directions that may here and there have reached corresponding levels, without however lying in the same level of advance". (P. 129) (2) "There is no parallelism except of a most general sort between the different aspects of each civilization. They do not, as it were, keep pace with each other". (P. 127) Beyond certain very general correlations, "the separate elements of civilization seem in each case to be driven forward by distinct determinants and to display most discrepant features of elaboration and advance". (P. 128).

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As regards the evolutionist doctrine of progress, Dr. Goldenweisser observes,—“Progress is no more a characteristic of cultural change than is uniformity or gradual development. Progress must be regarded as but one among several types of change characteristic of the historic process. The idea of progress, moreover, cannot be applied with equal success to all phases of civilization”.

We strongly recommend the book to students of Anthropology in our Indian universities as also to the general reader who may feel interested in the subject.

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Every-day Life in the New Stone, Bronze & Early Iron Ages.—*By Marjorie & C. H. B. Quennell. (B. T. Batsford & Co, London) PP. 119. Price 5 Shillings.*

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The Hill Tribes of Fiji.—*By A. B. Brewster, F. R. A. I., London: Seely, Service & Co., 1922. 8Vo., pp. 308. Illustrations and Maps. Price 21 S. nett.*

The admirable account of the hill tribes of Fiji given in this book is the result of intimate connection with the people during the author's forty years' residence in their country as an administrator. The habits in war and peace, methods of living, and mental and physical characteristics of the natives of the mountainous interior of Fiji are described with commendable care and accuracy. The accuracy of the author's observation and his sympathetic insight into the life and spirit of the people are beyond all praise. It is not possible in the compass of a short review to notice in detail the wealth of information about the people contained in this book. The author has drawn his materials mostly from his personal observation, and partly from notes supplied by reliable native assistants. The anthropologist will very much regret that the author has not utilised in this volume much of the information contained in the notes supplied to him by his native

followed by vivid and, as far as possible in the present state of our knowledge, accurate accounts of life and culture in Europe in those ages. The numerous illustrations will prove exceedingly helpful to the reader. We recommend the book strongly for school libraries. The general reader will also find the book very informing and interesting. The get-up of the book is excellent.

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The book under review is divided into two parts,—Part I dealing with British North Borneo, and Part II dealing with the Malay Peninsula. Part I is divided into three sections, namely, (i) Some Customs and Beliefs of “Orang Dusun”, (ii) Folk-tales of the Tuaran and Tempassuk Districts; and (iii) North Bornean Markets. Part II is divided into nine sections, namely, (i) Some Beliefs and Customs of the Negritos; (ii) Some Beliefs and Customs of the Sakai; (iii) Some Beliefs and Customs of the Jakun; (iv) Miscellaneous Notes on Malay Customs and Beliefs; (v) Malay Folk-tales; (vi) Malay Back-Slang; (vii) Setting up the Posts of a Malay house; (viii) Běla Kampong; (ix) Customs of the Camphor-hunters and Bahasa Kapor. The wealth of material collected by Mr. Evans and presented in this volume materially advances our knowledge about these races hitherto derived from the standard works of Skeat and

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This volume is the record mainly of the author's first hand study of the magic, beliefs and customs of the Ibibio tribe who live in the South-eastern part of Nigeria, and number in all over a million, of which hundred and fifty thousand inhabit the Eket district with which the book is chiefly concerned. The Ibibio are typical negroes and their language belongs to the Semi-Bantu group, with strong affinities to the Sudanic tongue of their neighbours the Ibo, with whom they have much in common. Besides his own personal investigations for which the author, in his capacity of Resident of Nigeria, had special facilities, Mr. Talbot had the advantage of finding at his disposal a quantity of valuable information collected by Mr. W. W. Eakin, a missionary who was in intimate touch with the tribe, and also the ever-ready assistance of the Ibibo Chief Daniel Henshaw who, as our

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Their secret societies form one of the most interesting features in the ethnography of the Ibibio, and vivid accounts of some of these societies cover two chapters of the book. No less interesting and illuminating are the author's accounts of the social organisation, tabu and other social and sociopolitical customs of the people. We eagerly look forward to the publication of similar volumes from the pen of Mr Talbot on the ethnography of other West African tribes.

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The main propositions which our author lays down and sets out to prove in this book are as follow:—All dancing was originally religious and performed for religious purposes. It was at a later stage that secular or utilitarian purposes came to be combined with the religious or more than one religious purpose in the same dance. Motion or movement, which, on the analogy of man himself, was believed by man in the pre-animistic stage to denote life, was the first thing which the savage mind connected with supernatural powers; and the origin of the sacred dance was the desire of early man to imitate motion or movement which he conceived to be the characteristic of supernatural powers. It was in the first instance not a dance in the generally accepted sense of the word, but merely a movement, whether in the form of swaying of the body in imitation

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of trees, or a single-file running in imitation of a stream, or a more boisterous movement in imitation of the waves of the sea or a storm-swept lake. The innate tendency to rhythmic action would soon have asserted itself, and primitive dance, in the more usual sense, would result. But it would be a *sacred* dance in so far that it was performed in imitation of some supernatural power, vague and originally impersonal. The purposes for which the sacred dance was performed not only by uncivilized men but by the most cultured races of antiquity are thus enumerated:—

(a) It was, first and foremost, performed for the purpose of honouring what were regarded as supernatural powers—vague and undefined powers in the preanimistic stage, beneficent as well as malificent spirits in the animistic stage, and gods and goddesses at a later stage. The reasons why dancing was regarded as a means of honouring these supernatural, later superhuman, powers are these: It was supposed to be an act of imitation, and therefore flattering to the higher power. Secondly, by “taking it out of yourself” in the presence of the power or deity you were offering something in the nature of a propitiation, whether as a gift or an act of self-sacrifice, in either case it would be honouring the higher power.

(b) Psychologically connected with the foregoing we have as another purpose of the sacred dance that of “showing off” before a higher power, the innate desire, common to the child and to

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man of immature mental development, to show what they can do in the sight of their betters.

(c) By imitating the supernatural power the imitator conceived himself to be making himself one with the power that was imitated. The idea in the preanimastic stage that an undefined union was brought about by means of the sacred dance seems to be the precursor of the more developed form of the same idea that union could be brought about by personating a god or a goddess. In the earlier stage, by imitating what a god *does*, i. e. dancing, union with him is effected; in the later stage, the like result is achieved by imitating what he is, and dancing in that guise.

(d) The earliest idea, though unexpressed, was that by honouring the god by dancing to such an extent that the dancing worshiper became unconscious the god showed his approval by imitating himself with the worshiper. The first signs of semi-consciousness would have been interpreted as the advent of the deity, and the beginnings of divine over-powering: Given belief in the possibility of divine indivelling in man, the further belief that the god utilized his worshiper as his month-piece was a natural and easy transition. [As instances the author cites the Bodo-priest of Assam, "devil dancer" of Southern India, and the Hebrew prophet who, in an ecstatic state, utters the will of Jahwe or gives an oracle].

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(*f*) Another purpose of the sacred dance was consecrating a victim for sacrifice (by means of a magic circle, as in the case of the Arabs performing a professional dance round a camel destined for sacrifice, or of the Isrāelites making the circuit round the altars or of the Kayans of Sarāwak circling round their Sacrificial pigs).

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(*h*) The sacred dance was sometimes performed probably with the purpose of assisting warriors to gain a victory in battle (through imitative magic), and perhaps of appeasing the spirits of slain enemies.

(*i*) As a marriage rite the sacred dance, during some time of its history, were meant to serve the purpose of combating the vague dangers which were supposed to menace those entering upon the married state. It was also perhaps believed to serve the purpose of bringing about a fruitful marriage on the analogy of the dance for making the crops grow.

(*j*) The most usual purpose of the sacred dance as a mourning or burial rite appears to be that of honouring the departed. In some instances it is in the nature of a propitiatory act whereby the spirit of the departed is persuaded to refrain from molesting the living. In some cases it is intended to prevent the ghost from roaming, or to scare away evil spirits who are believed to congregate in the vicinity of a corpse.

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Although we may not see eye to eye with our author in all his views and arguments regarding the origin and purposes of the "Sacred dance", the book is very suggestive and stimulating study of the earlier phases of the history of dance and the purposes of the various kinds of dance still practised among uncultured and semi-cultured peoples. The book will form a welcome edition to the anthropologists library. And even the general reader will find the book intensely interesting.

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I. CRAB FOLKLORE.

BY

S. T. MOSES, M. A., F. Z. S.

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the important are a cluster of stars known as the beehive and a dual star the Cancri. The Zodiac is regarded as the prototype of the human body, the different parts of which have corresponding sections there. The crab which is the 4th sign and which is usually represented by the symbol ♋ which 'represents' the breast. According to the Western Mythology, Juno sent a crab against Hercules when he fought Hydra. Cancer was however able to bite his foot and was mercilessly killed by him. Juno then took it up to heaven making it one of the 12 signs of the Zodiac. The name 'crab' was given to the sign because the sun, when it arrives at this part of the ecliptic, retraces its path sideways like a crab. The side-long motion of the crab is proverbial. A Greek maxim says 'The crab has not learned to keep his legs straight', and an English proverb says 'You can never bring a crab to walk straight.' Æsop in his fable teaching the moral 'Example is better than precept' makes a young crab, advised by his mother to walk straight, ask her to show him the correct way. She tries ever so many times to correct her slouching motion but in vain and accepts her child's reproof in silence. Boxers whose favourite strokes are side-thrusts are known in boxing circles as crabs.

Summer solstice occurs on the 21st of June when the Sun reaches 'Cancer' in the heavens and appears opposite the tropic of Cancer 'Kadagara rasi Rekai' the imaginary line parallel to and $23\frac{1}{2}$ degrees north of the Equator. As the Sun before

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turning back appears to rest there, this 'ayana santhi' is called 'Kadaga Sankaranthi'.

The crab is popularly reckoned to be monogamous and is considered a model of conjugal faithfulness. Science does not demolish this view since in the case of burrowing crabs, the burrow is occupied by one male and one female. The extraordinary solicitude displayed by the male when the female is moulting, in the case of the swimming crabs, is an additional proof of faithfulness, though it may last for only one season. Rama, the hero of Ramayana, was very chaste and he could not have been otherwise as he was born under the auspices of the Constellation Cancer. "In the 12th month on the 9th lunar day under the influence of the Punarvasu asterism when the Sun, the Moon, Saturn, Jupiter were at Aries, Capricorn (?), Libra, Cancer and Pisces and when Jupiter had arisen with the Moon at Cancer, Kausalya gave birth to Rama" p. 49, Dutt's Ramayana, Balakandam, Calcutta 1891.

Æsop's story regarding the crab's sidelong motion has already been referred to. The funny incident of the Dictionary-maker and Baron Cuvier, the French Naturalist, may now be mentioned. The lexicographer had defined crab to be 'a little red fish which walks backwards' and wished to hear Cuvier's opinion about it. "Admirable" said Cuvier, "but the crab is not necessarily little, it is not red till it is boiled, it is not a fish, nor does it walk backwards. With these exceptions your definition is perfect".

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Among the traditional stories current in South India among the Christians many of whom owe their conversion to the proselytising efforts of the Apostle of the East Indies, St. Francis Xavier, there are 2 relating to crabs. The cross crab or Xavier's crab (*Charybdis cruciferum*) is said to have retrieved Xavier's crucifix lost while cruising in the Gulf of Manaar. There are different versions as to the exact place where 'on his back the sacred cross he (crab) bore and swam a Catholic to the shore'. Some aver it was Mangalore and others different stations on the Fishery coast. Whichever the place, the cross mark on the carapace made by the heavy crucifix is seen even today on the descendants of that crab. Some say Xavier blessed the crab with a sign of the cross on its back as a token of thankfulness and this persists even today. A similar story is current about the rosary of Xavier and the hero is the rosary crab (*Carpilius maculatus*) which has 11 blood red spots disposed on the carapace in the form of a semi-circle.

In Panchatantra the famous Sanskrit collection of animal stories there is only one about the crab. A stork scared the fish in a tank with tales of fishermen proposing to fish there and deceived them to allow him to arrange for their transport to a safer tank. Fish were singly taken by the stork not to another tank but for being swallowed or dried as against future needs. A crab desiring similar benefit was also taken out by the stork. It had not flown far off, when

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the crab disillusioned by the sight of dried fish and bones, pitched upon a stratagem to avoid the dreadful fate awaiting him. He cunningly thanked the stork for his benevolent action and requested it to take him back to the tank so that he might induce the host of crabs living there to take advantage of the stork's offer of transport. The greedy stork readily agreed and took him back and, when the stork flew over the tank the crab viciously clawed the stork in the neck and severing its head from the body fell into the water 'where it lived happily ever afterwards'.

Some kinds of crabs, in spite of their being scavengers, relishing offal as their chief food, are readily eaten by man. In Madras City the crabs eaten are the common estuarine crab (*Kalinandu*) *Scylla serrata*, the marine paddle crabs (*Neptunus* spp) and the freshwater crab *Telphusa leschenaultii*, the total quantity consumed in one year (1921-22) being greater than that of any one kind of fish eaten there. (Vide page 140 Moses' *A statistical Account of the Fish supply of Madras*, Madras 1923). The castes who practise carcinophagy are mostly those inferior in social scale. The Kondras of Ganjam who catch crabs in Chilka lake derive their name from Konkada a crab. The Pallar an important left hand caste of South India display on their flag the figure of a crab. Of the Muhammadan Sunnies, those who acknowledge as their leader Imam Shafi eat crabs, while the other sect the Hanafi forbids the eating of those animals not explicitly demonstrated as edible by

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the Prophet Muhammad. (p. 87 'The Muhammadans of Pulicat' by Moses, in 'Man in India' Vol. III Nos. 1 & 2, March and June 1923).

On the 'Fishery coast' in South India, the ball crabs (*Dotilla*) and wasp crabs (*scopimera*) are known as '*Panjam katha nandu*' because of a tradition among the Paravas that these tiny little crabs—cf the English saying 'the greatest crabs are not always the best meat'—saved them from annihilation during a period of severe famine.

On the West coast, during August or September if a spell of sunshine follows heavy rains, the phenomenon of 'red water' lapping the sea-shore is noticeable. This water is foul and stupefies or kills all fish, crabs &c which swim through it. Affected crabs and fish are easily picked up and eaten if not long dead and putrified, with no ill-effects. It is one such occurrence that is recorded to have happened when the Portuguese were besieged at Fort Sen Angelo in Cannanore by the Zamorin of Calicut and Kola-thiri Raja in 1507 and were undergoing such privations as to resort to feeding on lizards, rats and cats &c. "On the 15th of August however a miraculous event occurred seemingly in answer to the prayers of the besieged to the Queen of Heaven whose feast day it chanced to be, for the sea sent forth shoals of crabs and prawns and the garrison lived in plenty" (p. 316, Malabar by Logan, Madras 1906).

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nursery rhyme which on translation runs thus:—
Eat river crabs and you will grow up a clever
man. Eat paddy field crabs if you wish to become
as brave as a tiger. Eat crabs living in damp
ground, if you wish to become the master of
your house.

The crab meat is 'Bonne Bouche' is mentioned in a Tamil riddle which is as follows:—He works in clay but is not a potter. He tours extensively even as far as Bengal but is not a Chetty Trader. He has eyes, no nose but is not a cocoanut. He has legs and no head but is not a decapitated corpse. He is very sweet to many". A Tamil proverb in exemplifying superfluity refers to the crab meat delicacy rendered more tasty by the addition of tamarind to it.

In South India there is a strong belief that the juice of many kinds of crabs is an efficacious remedy for many diseases. The Othaikalandu (*Gelasimus annulipes*) or the Dhoby crab with a monster claw as large as the rest of the body in the male, very common along backwaters and estuaries, is said to be useful in cases of earache. These crabs are collected and boiled in gingelly oil and the resultant forms excellent eardrops. The juice of Pal Nandu (*Ocypoda platytarsis*) so called because the carapace is as white as milk, is considered very efficacious in cases of pneumonia. Small crabs (pea crabs, *Pinnotheres*) and Bail crabs (*Dotilla*) called in Tamil Kadukkai Nandu as their size is that of a gallnut) are made into broth and administered internally for nervous

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debility and other weakness. Paniyans of Malabar and Wynad eat land crabs in plenty to get rid of baldness and to prevent the hair turning grey. Pliny recommends river crabs to be cut in pieces and drunk as antidote to any poison.

Some crabs, e. g. the Panju Nandu (*Dromia*) the velvet ball crab, are considered poisonous judged merely by appearances. On the West Coast the edible crabs are usually considered poisonous and regarded with suspicion in October and November and people there explain the change as due to the crabs feeding on poisonous weeds. Fra Bartolomeo in p. 241 of his 'A voyage to the East Indies, (1800) instances a case where he and his friends the Danish factor at Calicut and a Catholic priest partook of crabs during such a period and suffered in consequence—the Danish factor nearly losing his life.

A common belief current in South India is that crabs liberated in houses give rise to scorpions. (p. 69 'The Scorpions of South India' by Moses, in the 'Popular Scientific Journal' Vol. 8. 5, November 1922). The supposed relationship is seen from the Tamil name Nattuvakkali for the Rockscorpion which means 'the animal with the mouth and legs of a crab'. People believe if live crabs are confined in a pot for 2 or 3 days, there would be nothing but scorpions there. So crabs are never allowed into houses unless for immediate culinary use. But if a crab is seen in a plot of land where the foundations of a house are just beginning to be laid, it is considered very auspicious.

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The crab figures in many proverbs current in South India. When a man bungles a thing he is said to 'catch crabs'. Birds of the same feather are said to be 'crabs in one tank'. The untrustworthy watchman is compared to 'a fox in charge of the roasted crab'. The grip of a crab with its pincers is proverbially strong that in South India a popular belief is that the fox lets its tail into a burrow and when the crab grips the tail it is patiently drawn out of the burrow with the encumbrance which is at once made a meal of. Crabs being the pray of foxes their antagonism is expressed in Tamil proverbs such as 'What is pleasure to the fox is pain to the crab', and 'when the crab is dying the fox is making merry'. Playing into the hands of a foe is expressed in a Tamil proverb as 'a crab playing somersaults before a fox'. 'To break off the claws of a crab' is the equivalent of taking the wind out of one's sails. The pea-crabs (*Pinnotheres*) which live as commensals in Bivalves and seaslugs though unnoticed in South India—a Tamil proverb says 'Can you measure crabs like grain' showing that the Tamils had eyes only for the large sized ones.—are figured in Egyptian heiroglyphics and used to exemplify the dependance of man on his friends. Encroachment is compared to 'the spreading of the legs of the crab'. The effects of good eating are expressed in a Tamil proverb as follows:—"A crab when he grows fat would not stay in its burrow and a Palli grown fat (with wealth) would not condescend to squat on a mat". *

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II. CUSTOMS AND TABOOS OBSERVED BY A WEST BENGAL WOMAN FROM PREGNANCY TO CHILDBIRTH.

BY KALIPADA MITRA, M. A., B. L.,

Principal, D. J. College, Monghyr.

I read with much interest the article entitled "Customs and Taboos observed by an East Bengal woman from Pregnancy to Childbirth". In the present article I intend to narrate the customs and taboos observed by her sister in West Bengal. My observations are confined to the districts of Burdwan and Hooghly.

Before narrating the customs *etc.* I have to make a general observation that during this 'interesting' period much care is taken of the girl, and this holds good as well of modern as of ancient times. In the Pāli Jātakas we frequently read that when pregnancy was known precautions were taken to preserve the foetus in the womb, e. g. in the Surūci Jātaka (taken at random) we read "Rājā gabbha parihāram adāsi", i. e. the Rājā gave orders to take precautions to guard the foetus in the womb. In the *Asvalāyana-gr̥hyasūtram* (C. I. 11th Khanda) we read of (a) *garbhalam bhanam*, i. e. the rite by observing which the seed (foetus) becomes infallible (*amogham*), (b) *pumsavanam*, a rite observed to make the foetus a male child, ¹ (c) *anavalōbhanam*, rites

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against abortion or miscarriage; (d) *Simantonayana*, parting the hair of the girl with a bunch of green fruits which must be even in number. Allusion is made to (1) the *garbhādhana* (or ceremony to cause conception), (2) the *Pumsavana* (or ceremony to cause the birth of a male child), (3) *Simantōnnayana* (arranging the parting of the pregnant wife's hair), (4) the *jātakarma* (ceremony of the birth of the child) (5) *nāmakarma* (naming the child), (6) *nishkramanam* (taking out of the child in the open) (7) *anna-prāsanam* (the first feeding with boiled rice), (8) *Caula* (tonsure of the head, also called *vapanam*), (9) *Karnavedha* (perforation of the child's earlobes), (10) *vrata-des'a* (investiture of the holy thread), (11) *Vedārambha* (ceremonial commencement of the study of the Vedas), (12) *Kes'antam* (ceremonial cutting of the child's hair) etc, in the *Dharmas'āstras* of the Hindus. ² In the Bengali *Pañjikā* (See, e. g. Gupta Press of 1331 B. S.) we find mention of 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, (*upanayana*) and 11, In addition we find *pañcāmrita* and *Sādha bhakshana* which form the subject of the present article. Whether the rites of *pumsavana* and *simantonnayana* are still observed is not known to me, though mentioned in the *pañjikā*.

In West Bengal too as soon as a girl is known to have conceived she becomes the object of the most delicate care and attention and pre-

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In the fifth month *pañcāmṛita* is given after worship has been offered to the *Vāstudevatā* (the presiding deity of the house) and other deities in general. It is so called because of the five ingredients offered in worship viz: milk, *gur* (molasses, a substitute for sugar, being perhaps considered to be purer than sugar which is in most cases imported), *curds*, and *honey*. This is celebrated on an auspicious day which is fixed after consulting the *pañjikā*, and falls (and must fall) on a *jiyotsnā* (white-moon) day, either on Thursday, Friday or Sunday. I have taken statistics of all the auspicious days for this ceremony in the Bengali Year 1331 B. S. which are distributed as follows—13 Thursdays, 9 Fridays and 8 Sundays. The girl wears new cloth (*Sāri*) with red border called *S'reekhaṇḍe* (the piece is made whole instead of a part with a dividing line between, and has therefore no *Chhīla* as it is called) specially prepared by village weavers for the purpose. The *Sāri* is marked either in the corner or elsewhere with turmeric paste. Women and children are fed on the occasion with sweetmeat. The cost of the feast is borne by that party, her father's house or father-in-law's house—where the girl is and the ceremony is celebrated. Not in all families does the ceremony obtain, e. g. it did not obtain, in the case of my mother and a sister.

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In the fifth month *pañcāmrita* is given after worship has been offered to the *Vāstudevatā* (the presiding deity of the house) and other deities in general. It is so called because of the five ingredients offered in worship viz: milk, *gur* (molasses, a substitute for sugar, being perhaps considered to be purer than sugar which is in most cases imported), *curds*, and *honey*. This is celebrated on an auspicious day which is fixed after consulting the *pañjikā*, and falls (and must fall) on a *jiyotsnā* (white-moon) day, either on Thursday, Friday or Sunday. I have taken statistics of all the auspicious days for this ceremony in the Bengali Year 1331 B. S. which are distributed as follows—13 Thursdays, 9 Fridays and 8 Sundays. The girl wears new cloth (*Sāri*) with red border called *S'reekhaṇḍe* (the piece is made whole instead of a part with a dividing line between, and has therefore no *Chhila* as it is called) specially prepared by village weavers for the purpose. The *Sāri* is marked either in the corner or elsewhere with turmeric paste. Women and children are fed on the occasion with sweetmeat. The cost of the feast is borne by that party, her father's house or father-in-law's house—where the girl is and the ceremony is celebrated. Not in all families does the ceremony obtain, e. g. it did not obtain, in the case of my mother and a sister.

We do not know of *Saptāmrita* in the seventh month; but such a thing as *bhājā* (fried things)

is given to the girl. If she be in her father-in-law's house, then her mother, mother's sister or female relatives send *bhājā* to her there. If she be in her father's house, her father-in-law's family send *bhājā* there. *Bhājā* consists of 7 kinds in all viz. *murki*, *khai*, *chinda* (flattened rice), *rice* (fried after being tinged with turmeric), *maṭar*, *mug* and *biri kalāi*. Sweetmeat also accompanies.

In the third month without particular worship or formal ceremony fruits are sent to the girl when distaste for eating things comes upon her and she feels a longing to eat acid things. ³ So usually acid fruits, amongst other things, are sent to the girl besides *āmsatva*, *ācara* etc. This is called *Kāñcā sādha*. (No such word as *pākā sādha* is known to my sister). Some families have an informal *Sādha* in the fifth month.

The *Sādha* in the ninth month is *par excellence* the *sādha*, and referred to as *Sādha bhakṣhaṇa* in the *pāñjikā*. It occurs on a bright day of the lunar fortnight and is fixed as in the case of *pañcāmrita* after consulting the *Pañjika*. In 1331 B. S. 6 fall on Thursday, 4 on Friday, 3 on Sunday, 6 on Monday, 4 on Tuesday and 4 on Wednesday. The girl wears the *S'reekhaṇḍe* or uncut *Sārī* as she did in her fifth and seventh month. (No foreign (बिजाती) *Sārī* is permitted). This is essential. Ornaments and clothes are also presented to her by her friends and relatives. In all the ceremonies *pañcagabya* is a necessary

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thing. All the *sādhās* are given the generic name of "*Sādhantir Sādha*". In the ninth month sweets are much more in evidence; the girl is fed with *pāyasa* (a preparation of fine rice boiled in sugared milk) and other sweets. [Even amongst the Goalas, Kānus, Dhānuks etc. of Monghyr the custom obtains of feeding the pregnant girl in her ninth month with *gulgulā*, a preparation of *gur* (molasses) and *āṭā* (wheat powder coarsely sifted) fried in mustard oil, *purī*, *mithāi* and and *kshīra*]. The eating of sugary things according to an eminent doctor friend of mine helps the mobility of the bones about the pelvic region and contributes to an easy delivery.

This *Sādha* was not unknown in ancient times. The Sanskrita word for it is *dohada* and the Pāli word, *dohala*, meaning desire, longing. The pregnant woman pretends she would die if she did not get the object of her longing; she in one word would not be refused; and the husband necessarily is thrown into the most risky and adventurous bargains of which the Jātakas, at least, are redolent. We read in Raghuvams'a "*Upetya sādopada duḥkhas'īlatām yadeva vavre tadapas'yadāhṛtam*", i. e. when she felt a longing, whatever she demanded she saw brought before her. The great Bengali poet, Mukundarāma Chakravarti, author of *Kavikañkanachandī*, and a native of the Burdwan district, gives an account of this *Sādha* twice viz, in the cases of Nidayā and Khullanā. The idea is that parturition is a critical affair and perchance the girl might die and therefore she is fed with what she desires to eat.

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This is the explanation which is offered to me by the female folk of my family. Khullanā says to Lahanā, "*Didigo eve bada sankata parāna*; 'Sister dear, my life is now in a critical condition', and she enumerates a list of things she longs to eat. This as now was given in the ninth month: "*Naya māse Nidayār sādha deya vyādha*; in the ninth month the hunter gives *sādha* to his wife Nidayā".

She is permitted to remain alone in daytime, and even to cook alone. She may go to bathing ghat alone in daytime but not in the evening. But she must on no account go to wash fish in the ghat, for fish is coveted by spirits; and it betokens ill if the fish is snatched away by a kite. In some cases she is not allowed to sew, she is not allowed to stir outside for one or two days when a neighbour dies; it is not essential that she should be confined for three. She must not go to a house where a child is born in the lying-in room, nor to a house where a baby dies. She must not step over the footsteps of the mother who has lost several children (*maruñice*). There is no restriction to her taking meals at night. She must not eat, however, at the *sādha* of another girl. A girl, pregnant or not, does not eat twin plantains or twin fruits, which may symbolise the birth of twin sons, against which there appears to be a feeling. Birth of twins is regarded, though not injurious, yet uncanny, among the Polynesian races. ⁴ She must not go under

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the shade of such trees as *neem*, *bel*, *bamboos* and *sheorā*. She must not sleep on the verandah with her loose tresses dangling and touching the ground. She should avoid the shade of the eaves.

At what is called 'Second marriage' or the attainment of puberty the girl on the fourth day of her flow goes through a mock drama of the whole series from conception to childbirth. Instead of a doll made of pounded rice a stone represents the child and after touching the abdomen is slid down to the ground, is picked up, placed on the lap, and applied to the teats.

There are two practices ⁵ observed after the mother is delivered of the child, viz. (1) *Harir lūṭh* (lit. Hari's plunder); and (2) *sek* or fomentation. Now in the case of *Harir lūṭh* the family entirely depend on the mercy of Hari in regard to the well-being of the baby after birth. The fire is avoided except for warming milk for the baby. Instead of baking (?) ⁶ the baby and its mother in the fire, they are baked or bathed (basked, from Sc. *badask*, to bathe) in the Sun. Within two or three hours of the delivery the mother, if able, goes and bathes in the tank, otherwise she is bathed inside the compound of the house. She can go out to answer calls of nature. On the fifth day (called also *pāñcutē*) she pares her nails, paints *āltā* (lac); and rags etc. and unclean things are all thrown away. The infant is also bathed on that day. Daily, from the

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birth of the child till the 21st day, *Harir luth* (or flat sugar cakes, called *bātāsa*, consecrated and placed under the *tulsi*, or sacred basil) is given and distributed. The mother eats a pinch of earth taken from the root of the sacred plant, and a little earth is touched to the head and the navel of the babe, and occasionally Ganges water is sprinkled. The room is kept scrupulously clean. The mother keeps an iron key tied to her apron and iron is put under the bed of the child.

In the *sek* or fomentation process, however, on an earthen-pot fire is always kept ready inside the lying-in room where the mother and the baby are fomented daily. The mother can go out but, before she comes back to the room she must tread on the broom-stick placed outside the door, and touch iron and fire. The following things are kept at the door,—viz. torn shoes; a piece of net usually attached to the upper door sill; a shovel ⁷ on one side of the door; some cowdung; and a stunted (worn by constant use) broomstick. This agrees very well with the description given in *Kavikankan Chāṇḍī*:

“*Duāre bāndhila jāla vetra upānad,*

Kāriyā chāler khara jvālila aurī.

Duāre pūjena shashṭhī sthāpiyā go-murī;

Chhaya dinē Shashṭhī pūjā kaila jāgaraṇa.

Ashṭa dinē ashṭa kalāi karila Lahana.

Naya dinē nattā karila manera harashē

Shashṭhī pūjā kaila tāra ekūs'a divasē.

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Translation.—On the door she bound a net, a cane and shoes, and taking the straw from the thatch she lighted it in an earthen pot (?). She worshipped *Shashṭhī*, after placing a cow's skull at the door. On the sixth day she worshipped *Shashṭhī* by keeping up the whole night. On the eighth day *Lahanā* observed the ceremony of *ashṭa kalāi*; on the ninth day she caused the ceremony of *nattā* (i. e. paring of nails by a barber woman and the clearing away of the rags of the lying-in room) to be performed. On the 21st day *Shashṭhī* was worshipped.

Likewise on the sixth day on which it is believed that *Vidhātā Purusha* comes and writes on the forehead of the boy what is to happen to him in his life, a lamp burns the whole night in the lying-in room. In some cases the mother with the infant in lap remains awake the whole night. A spot within the room is cleansed with cowdung. On a *pīñre* (a low wooden stool) four lumps of moist clay are placed in the four corners into which are fixed four bamboo sticks split at the top wherein are inserted little palm-leaves. New thread is passed six times round the sticks at the top to form a ring as it were. This is called the *तौर घर* (*tīr ghar*). A new earthen pot is put with its mouth resting on the *pīñre*, thus presenting the convex outside of the bottom whereon are placed two lumps of wet cowdung in which are fixed two shells (*cowrie*) with vermilion paint. A new cloth smeared with turmeric paste covers the *hāṇḍī*. On the *pīñre* are placed slough of cobra, brick-powder, fruits, sweets, *aruā* (sun-dried) rice (one

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seer) and plantain. Oil mixed with turmeric paste is placed in a small cup which is used by the mother and the baby the next day. New reeds, two in number, one new inkpot containing red ink or lac-dye (*ālā*) newly made and palmyra leaves complete the stationery. A Brāhman comes and performs the worship. The belief regarding the *Vidhātā Purusha* ^s coming and writing the future history of the boy on his forehead figures largely in the nursery tales of Bengal when the old man (!)—*Vidhātā Purusha*—is not unoften tricked and compelled like Proteus to yield the secret. In village Naldha (Pabna Dt.), a *Sil* (slate) and chalk are kept. In Jessore, on a *gāmechha* (napkin) 108 *Vishnu* names or 12 *Rāma* names are written with turmeric. In Nadia and Murshidabad districts, collyrium, a napkin tinged with turmeric, a rupee, rice with husk (*dhān*), inkpot, pen, and palm leaf are kept. Thus ends the *Shashthī* or *Sheṭerā Pūjā*.

On the eighth day the ceremony of *ātkaḷāi* or *ashṭa kalāi* is gone through in which eight kinds of fried things are distributed amongst male children who sing a song, keeping time by beating a *kuḷā* or winnowing fan, such as,

āṭkowṛe bāṭkowṛe chhelē āchhē bhālo.

In some families *nattā* (explained above) is performed on the ninth day. This is known in Jessore as *nava kāmāna*.

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On the 21st day there is again *Shasthī puja*, the *pūjā* on the sixth day in some cases as noted above being distinguished as *Sheterā Pūjā*. The mother pares her nails, bathes, wears *ālā* (lac-dye), vermilion, new red-bordered *sārī*, and worship is offered under the shade of a tree, generally *baṭ* (banyan), sacred to the goddess. When custom does not permit the mother to go outside, a twig of the *baṭ* tree is taken and planted inside the room on a *ghaṭ* (earthen jug). Twenty small and one big baskets (called *pete*) of which the rims are not bound (*muribāndhā naya*),—each small basket containing parched rice (*khai*) with husks still attaching, a shell (*cowrie*), a plantain, flat sugar cakes (*bātāsa*) and the larger one containing a bunch of plantains, *naibedya* of *āruā* rice—are arranged, the big basket being given away after the worship to the *dāi* (midwife) and the little ones to children. A *Brāhman* worships. The mother now becomes ceremonially clean and comes out of the lying-in room; but she is not finally so before one month is over and in the intervening period she is not allowed to fully participate in household duties and touch all things. After 30 days again she pares her nails but no ceremony takes place. On whichever day the mother bathes, the babe bathes too. Ganges water is sprinkled on the last day.

In villages a fresh hut is assigned as a lying-in room, but no particular restriction seems to be observed regarding the quarter the door is to face.

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Kanus etc., I am informed that in the room of *parsūti* (the mother) an earthen pot to keep fire is placed (*ghurā bareche*) wherein mustard seeds, *ājowan* (*carum copticum*) and sulphur are thrown. To charm away evil spirits a cowdung cake is perforated and hung with thread from the middle of the upper *chowkāṭ* of the door, besides *muthuā sīj*, *lasun* (garlic) and *mirchāi* (*capsicum*). Iron is kept near the mother.

No fish is allowed in the family during confinement in the Nadia, Murshidabad, Pabna and Jessore districts.

Now as for the magic resorted to in charming away evil spirits from the mother and the baby and guarding the room against them: I do not now hear in the Burdwan and Hooghly districts of a cow-skull being placed at the door for worshipping *Shashṭhī* as mentioned in the *Kavikañkan Chāṇḍī*. Memory of many usages has died out and will soon perish if we are to live as we do the isolated individualistic lives away from villages under the pressure of socio-politico-economic forces. In Pabna and Jessore districts, however, the skull of the cow is still placed above the door of the lying-in room. In *Narāil* it is placed on the wall of the room which is made of split bamboos. Torn shoes and broomsticks are symbolic punishments to witches or evil spirits who might intend to harm the mother and the baby. In the construction of new buildings one sees these things tied to the top of a bamboo pole to avert the evil eye or perhaps to

Kanus etc., I am informed that in the room of *parsūti* (the mother) an earthen pot to keep fire is placed (*ghurā bareche*) wherein mustard seeds, *ājowan* (*carum copticum*) and sulphur are thrown. To charm away evil spirits a cowdung cake is perforated and hung with thread from the middle of the upper *chowkāṭ* of the door, besides *muthuā sīj*, *lasun* (garlic) and *mirchāi* (*capsicum*). Iron is kept near the mother.

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Now as for the magic resorted to in charming away evil spirits from the mother and the baby and guarding the room against them: I do not now hear in the Burdwan and Hooghly districts of a cow-skull being placed at the door for worshipping *Shashṭhī* as mentioned in the *Kavikañkan Chāṇḍī*. Memory of many usages has died out and will soon perish if we are to live as we do the isolated individualistic lives away from villages under the pressure of socio-politico-economic forces. In Pabna and Jessore districts, however, the skull of the cow is still placed above the door of the lying-in room. In *Narāil* it is placed on the wall of the room which is made of split bamboos. Torn shoes and broomsticks are symbolic punishments to witches or evil spirits who might intend to harm the mother and the baby. In the construction of new buildings one sees these things tied to the top of a bamboo pole to avert the evil eye or perhaps to

scare away the evil spirits who are disturbed by digging etc. The cane mentioned in the *Chandī* is for the same purpose. In the Pabna and Jessore Districts cane is placed over the door of the lying-in room. In *Narāil* it is hedged round with a creeper called *Koomurke* (*Smilax ovalifolia*) the stem of which is prickly. The thorn of both perhaps is distasteful to spirits. The net prevents evil spirits from entering the door. There are innumerable references which point to the dread of iron by spirits. See, for example, Frazer's *Golden Bough* (*Taboo and Perils of the Soul*) pp. 229-235, the *Pāli Jātakas* (e. g. the *Ayoghara Jātaka*), *Myths of China and Japan* by D. A. Mackenzie (p. 37 f.) etc. It is needless multiplying references. Fire also purifies and destroy all evil influences, hence the significance of the mother going outside treading on the broomstick, touching the iron and warming her hands in the fire before she touches the baby and thus communicates to it any evil. Cowdung is purifying. The *piūrē* and the *tir-ghara* symbolize the *Vedī* for the offering of rites, and the space 'ringed-in' by thread becomes specially pure. Compare the *paritta suttom* in the Sinhalese Pirit ceremony. In the *Pāli Jātakas* we read that palm-leaf is dreaded by spirits. *Tir-ghara* is used on all other ceremonial occasions and *pujās* and seems to me to be a reminiscence of the sacrificial altar (*Vedī*) guarded against *yātudhānas* (demons) now mixed up with *āupanishadic* magic rites (cf. *Kauṭilya's Arthaśāstra*, *Vātsyāna's Kāmasūtra*, *Asvalāyana's Grihyasūtra*). A girl in her first menses when confined

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to the room lives within a space secured by four split bamboos with a small palm-leaf between, placed at four corners of the room and wound round by thread, making it a magic *gandī* to which no evil spirits have access. It is interesting to note here that the Paritta *mandapam* in Ceylon, is a "large quadrangular hut built of bamboo-sticks and covered with palm-leaf thatches".⁹

Shells are auspicious things and generally associated with the worship of the goddess of luck—Lakshmī. "They were anciently believed to promote fertility and bring luck. The custom of placing shells on window-sills, at doors, in fire-places, and round garden plots still obtains in parts of England, Scotland and Ireland".¹⁰ It indicated luck to the Greeks, Romans and Egyptians. The merit of the Buddhist was believed to grow in "shells".¹¹ Turmeric is always used as a *māṅgalya* or an auspicious thing, and it was supposed to have the property of scaring away spirits.¹² The slough of cobra perhaps indicates fertility, luck, wisdom (Cf. the Biblical phrase "*Be wise as the serpent but tame as the dove*") etc. In fact, in India, Serpent worship is very ancient, being common amongst the Dravidians and subsequently adopted by the Aryans. There are many involved skeins of myth confusion not easy to disentangle. Brick-powder is red which is

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From the middle of the *chowkāṭ* (sill) of the door of the lying-in room of *Goals*, *Kanus* etc. of the Monghyr District a cowdung cake is suspended. It has a double significance. Cowdung is regarded as purifying. Then again the cake is circular and circular things are dreaded by spirits. *Muthua sij* is sacred to *Manasā devi* the presiding goddess of serpents. In Bengal the tree itself (*Euphorbia Nivulia*) is called *Manasā* tree and the goddess is worshipped under it. There are other varieties too, viz. *Euphorbia neriifolia* and *Euphorbia antiquorum*. *Mirchai* (*Capsicum*) is red: I am not quite sure if the red colour or the pungent smell is threatening to spirits. Mustard seeds are extensively used in charming away spirits, and pages can be devoted to the description of its properties which the reader may be spared here. I am not aware of *ājowan* being used in magic. "Ghosts are fumigated away by Malay children with onions or sulphur".¹³

Longing for matrimony is natural to women. In many cases young women 'die' (to translate a Bengali phrase) for children, and they will fast themselves to fainting, wear out their knees and swell their foreheads in prayers and worship to gods and goddesses and bruise the soles of the feet in making

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pilgrimages. Near Bandel (Hooghly District) there is a goddess *Siddheshwarī* where girls who are either tardy in conceiving or who have lost a child would go to do what is known as *phula kāraṇa* (फूल काढ़ान). The girl on the fourth day of the flow comes early in the morning to the temple of the goddess. Then she bathes in the adjoining tank and stands with folded hands in the yard before the goddess. The *pūjārī* places a flower (preferably *javā*) on a green cocoanut on the *ghaṭa* or the sacred vessel and begins to utter cries of *Mā mā* (Mother, Mother). If the flower falls down, it indicates that her wishes would be realised and that she would have a child. Then she is given some medicine which is already made into a paste by an old woman there and which is inserted into a plantain. On the birth of the child, worship is offered to the goddess. If there be any delay, then the child's hair is cut off and kept ceremonially apart till the final worship. Amongst other offerings the goddess is presented with an entire *kāndī* of that plantain which was used in taking the medicine. In some cases the child is named *Siddhes'wara* or *Siddhes'warī*, according to sex, and is called *Siddhes'warir duār dharā* (i. e. gift of the goddess *Siddhes'warī* at whose door penance has been done).

Another example of divination as to whether the girls' prayer for children will be heard or not is furnished by the custom of women longing for children going to *Pādamba Shahbazar* in the

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Near Gopinathpur in the Hooghly district there is a tank called *Puñyepukur* (*पुणे पुकुर*). Now let me explain what *puñye* is. If a child be very weak and cannot suck the milk from the teats, looks all bone and skin, and thus being weak does not possess the colour of health, it is believed that it is possessed by the *puñye* spirit or *pūtānā* spirit or *peñcho* spirit. Bankim Chandra Chatterjee in his *Kṛishṇa Charitra* ⁸ says that *Kṛishṇa's* killing of the *Rākshasī Pūtānā* probably referred to his conquest over that particular disease of the babe in the lying-in room when he changes colour. Now the mother whose children die of it bathes in this tank and is cured of the evil spirit's charm and her next child lives healthily. It is said if the child could be bathed it would recover from the attack of *puñye*. There is also a tank called *Tīyas pukur*, like the one mentioned by Mr. Majumdar, in the Hooghly district, the exact locality of which can be given after further enquiry. The mother who has lost her children bathes

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here and bears thereafter healthy and long-lived children. No fish is let into the Jiyas Tank. In an article entitled 'the Antiquities of Eastern Bengal' published in the *Calcutta Review* (May, 1924 p p, 220—221) mention is made of the Jiyash Pukur in the village of Dasore where during the Sivarātri Festival "unfortunate mothers who have experienced frequent losses of children perform ablutions". It is noteworthy that *jiyash* means *life-giving*. The custom of women embracing the banyan tree while praying for children and making a vow to it is to be compared to the custom of making *mānat* (vows) to the banyan trees in west Bengal supposed to be the seat of the goddess *Shashthī*. Demanding children from *Dryads* or tree-spirits has perhaps an antiquity at least coeval with the Vedas, and allusion to prayers to banyan trees for gift of wealth and children is noticed in the Pāli Jātakas (nos. 98, 109, 30), 493. The worship of Siva in this connection is to be noted. At the village of Dasghara in the Hooghly district there is a famous god, named Bābā *Pañchānana Siva*, who is said to be very 'wakeful' (जाग्रत) and to grant prayers. No goat is offered to him. There is a tank which is sacred and before worship the girl has to bathe in it. Children who are the 'gifts', of the god, so to say, are named *Pañchānana* or *Pañchānani* according to sex.

Near *Triveni* in the Hooghly District girls desirous of children are taken to the god *Pāñchu Thākur* (पंचु ठाकुर) who presides over the *peñchō* spirits. Now there is an *oracular* woman belonging to some low caste either *Chandālā* or *Bagdī*, I am

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not now sure, which) to whom the prayer is recited for communication to the god. In a dark room in the evening is placed, on a dish, a cup of *khīra* and the door is then closed. The woman sits on the *dawā* (raised verandah) and the girl with her relatives in the courtyard, covering, in fear, their heads. After the invocation of the spirit, the whole thatch is shaken with the noise of *marmar* (onomatopoetic to suggest breaking) as if caught in a cyclone. Then it ceases, and a nasal voice of enquiry is heard, "*Māsi* (mother's sister), where is my food"? The *Māsi* says, "Sonnie dear, it is on the dish". This is called *Chañḍa nāmāna* (चण्ड नामान) causing the *Chañḍa* spirit to descend. The spirit then enters the body of the woman and sways it from side to side and makes her oracular, and the girl knows whether her prayers will be granted or not. The god is believed to cure *peñchoay*, *pāoā*, or attack of *peñcho* spirits.

Manipulation of the head of the infant and other parts of the face to give them proper and desirable shape is also practised in West Bengal. A hard pillow is avoided; one is made specially for the child. Within the pillow-case are put mustard seeds (so that the head adjusts itself properly), and cotton of *akanda* (*Colotropis gigantra* or *procera*) (both because it is soft and dry and therefore prevents cold); bits of iron are also placed inside. Besides the explanatoin in brackets given by the female folk, the above things have a magical significance. The *akanda's* virtues are related in *J. B. O. R. S.* vol. pp. 191 ff.

III. A FEW REMARKS ON THE SEMA NAGA KINSHIP TERMS.

BY DHIRENDRA NATH MAJUMDER, M. A.

(The present paper is the result of an application of the hypothesis advanced by Dr Rivers that the terminology of relationship is dependent upon social customs. Materials for the paper have been taken from J. A. Huttons' *Semā Nāgās*).

Before we proceed to describe the *Semā Nāgā* kinship terms which are of a classificatory character, it is desirable that something is said about the characteristics of different kinship nomenclature. There are practically two systems of kinship terms, one in which the terms are applicable not to single individual persons but to classes of relatives which may often be very large and the other in which the terms denote single individual persons; but in reality this latter system of nomenclature is not to be found anywhere. Even in our own system we sometimes denote a group of individuals by one common term—so that the difference in the two systems may be reduced to one of degree,—that is to say in the classificatory system a term is used to denote a larger number of individuals while in the descriptive system of terminology, a term refers ordinarily to one single individual. There is another distinguishing factor in our system—we possess separate and fixed terms to denote such relations as father, mother, husband, wife, son etc. so that our system has often been called the family system.

As examples of classificatory system of relationship, the *Semā Nāgās* use one word 'ājā' to denote—

- 1] mother,
- 2] father's brother's wife,
- 3] mother's sister,

'āpu' to denote [1] father,
[2] father's brother,
[3] mother's sister's husband,

'āni' to denote [1] father's sister,
[2] wife's mother,
[3] husband's mother,
[4] husband's sister,
[4] husband's brother's wife,

The Angami Nagas use 'shi' to denote

- 1] wife's elder brother,
- 2] wife's elder sister,
- 3] husband's elder brother,
- 4] elder sister's husband,
- 5] elder brother's wife,
- 6] mother's brother's wife,
- 7] father's brother's wife,

etc.

Again the term 'Ni' is used to denote—

- 1] father's brother's wife
(w. s.),
- 2] elder brother's wife(w. s.),
- 3] husband's elder sister
(oldert han speaker),

The Thado Kuki uses the term 'hepu' to denote—

- 1] father's father,
- 2] mother's father,
- 3] mother's brother,
- 4] wife's father,

- 5] mother's brother's son,
- 6] wife's brother,
- 7] daughter's husband's
parents,
- 8] wife's brother's son

The *Chang Nāgās* use 'āpo' to denote—

- 1] father,
- 2] father's brother,
- 3] mother's sister's husband,

The Tamil people use one term 'mama' to denote—

- 1] mother's brother,
- 2] father's sister's
husband,
- 3] father of both husband &
wife,

According to Dr Rivers, in the most complete form of the classificatory system there is not one single term of relationship the use of which tells us that reference is being made to one person and to one person only.

The question of the origin of the terminology of relationship has been attacked from different standpoints;—some have explained it by referring it to a psychological similarity existing between persons denoted by the same term, while others have recognised social functions as determining the terminology of relationship. Dr Rivers has championed the latter theory and it is the most possible hypothesis we possess up till today. Where we find the Tamil people using the term 'māmā' to denote (1) mother's brother [2] father's sister's husband and [3, 4] the father of both husband and wife, we come to a point which can easily

be explained by referring to social function antecedent to the use. Thus the custom of cross-cousin marriage is very much prevalent amongst these people and as a result of this form of marriage, the mother's brother and the father's sister's husband get to the position of father-in-law and consequently we find only one term to denote mother's brother, father's sister's husband and the father of both husband and wife. ¹

But we should not lay absolute stress on the importance of social functions in determining the terminology of relationship as there are other factors which need be considered. When the same term is used to denote a number of relations male and female—how can we explain the use? Is it due to any psychological similarity existing between the male and female relations denoted by the term? Take for instance the case of the *Semā Nāgās*:—They use word 'apuza' to denote the [1] father's mother [2] mother's father [3] mother's mother. The Angamis use 'thi' to denote as many as seven kinds of relations e. g. 3 male and four female relations. Now how can it be accounted for? There is no psychological similiarity

¹ We in Bengal find that grandfathers are allowed some liberties with their grand-daughters as regards conversation is concerned and similarly the younger brothers of the husband enjoy some such license; may we not account for these sweet addresses by some social functions determining them—the former being a vestige of a time when grandfathers (in a classificatory sense.—*Ed.*) used to marry their grand-daughters and in the latter case all the brothers used to share each other's wife? This may seem very absurd to us but we can adduce instances from the island of Pentecost where grandfathers may have access to their grand-daughters.

to be sure—the only explanation which can be offered here is the poverty of the language they speak. Rich vocabulary is an acquisition of the cultured people and the vocabulary of a people very often determines their cultural stage. An imperfect language is the outcome of an imperfect civilisation, it only fulfils the wants of those who speak the language. I am afraid, I am treading on a disputable area and I must refer here to Professor Friedrich Ratzel who writes in his "*History of Mankind*" vol. I, 'In any case however it may be taken as a rule that the larger a race is, the more intimate its intercourse, the more firmly articulated its society, the more uniform its usages and opinions, so much more stable will its language be'. Requirements decide what the wealth of language shall be. When we say that the Australian language is very poor, we mean that the stage of civilisation the Australians have arrived at is a low one and the language subserves the simple wants of those who speak it".

Without going any further into the complexity of these general problems, let us examine the structure of *Semā Nāgā* society to see what clue it affords as to the origin, of the Sema kinship nomenclature.

The *Semā Nāgās* use one word 'Angu' to denote.

- 1] Mother's brother
- 2] Mother's brother's child (male)
- 3] Husband's father
- 4] Wife's brother

5] Husband's brother

6] Wife's father

Here we see that the Sema term is used to denote as many as six relations and that it is also used to denote persons of two generations indiscriminately. To account for this use of the term 'Angu' let us go deep into the Sema society and find out if there is any such custom which might clear away these points. The custom of polygyny is commonly prevalent amongst the Semas—not only chiefs marry number of wives—the well-to-do Sema will at once take to more than one wife. The ordinary Sema may often avoid a second wife for poverty but the tribe as a whole is very prolific. Again the Sema allows a widow to inherit her husband's property so when a Sema is seen to marry his deceased father's widow, we may explain it by reference to this law of inheritance which obliges a Sema to marry his own father's widow other than her own mother in order to be able to inherit the property otherwise devolving upon the widow. If of course the widow does not agree to the marriage sanctioned by custom she is allowed to depart from her husband's shed—with all the movable properties her husband had left and which she has a right to inherit. The general rule is that the widows of the deceased marry the sons of their deceased husband and live in the family as mistresses. I learn from J. H. Hutton's volume on *The Semā Nāgās* that in case a man dies leaving only young children—the property of the deceased devolves

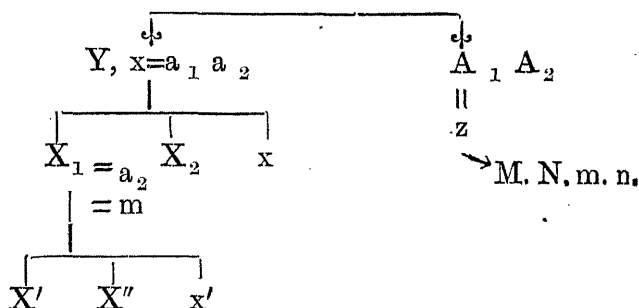
upon the man's brother who takes care of the property and, after his death, the nephews and sons of the deceased stand in the same relation to the widows of the deceased. A suggestion as to the origin of this kind of marriage has been offered by Mr. Hutton in the above monograph. He writes, "It appears likely that it may have its origin in its obvious advantages:—The widow naturally wishes to retain the care of her children but as these pass into the guardianship and keeping of her husband's heir, she can only do so by marrying him, a proceeding which also ensures her retention of the ornaments that formed her dowry. This also avoids, from the point of view of male, stepmotherhood". It is not my intention to go into details to prove or disprove this position of Mr. Hutton but I cannot restrain the temptation to offer a few remarks by way of a passing criticism. I must confess I cannot understand this psychology of the *Semā Nāgās*. If the widows, as is but natural, are so zealous of taking care of their children, this could easily be effected by a sanction from the Sema society. As widows serve useful purposes in the domestic circle, the care of the children might naturally have been left with them. As regards the retention of the ornaments the Sema laws allow a widow to depart from her husband's shed with all the movable properties her husband had left and which she has a right to inherit, in case she does not agree to marry her deceased husband's heir. So this marriage is immaterial to safeguard the interests of the widow. Perhaps the real explanation of this custom of marrying the widows

of the deceased father may be traced to an idea of property in women which is a common fact and is found in many primitive societies. The women are regarded as movable properties and the sons being the natural heirs—inherit the widows of their deceased father.

Whether it is the desire to inherit the property of the deceased father or the widow's desire to take care of her children by the deceased, the Sema is found to marry his father's widow. Now let us see what difference is made in the terminology of relationship if we take this custom as granted. We should also bear in mind that a Sema may marry his mother's own sister, he may marry his father's sister's daughter, mother's brother's daughter. Says Mr. Hutton, "A Sema may not marry his wife's mother but can marry practically any female relation of his own mother on her father's side. For although some Semas are said to forbid marriage with a mother's sister by the same mother, even though the father be different, the vast majority hold that a man may marry his mother's sister by the same father and mother without any suggestion of impropriety". Now let us take the case of 'Angu';—we can solve the use of this term in two ways. If we take for granted that there was a dual organisation in Sema society, the use of one term to denote six kinds of relations will be easily explained. But it can also be proved even if we do not admit a dual organisation.

Even if we do not admit a dual system in the

Semā Nāgā society we can explain the use of the term 'Angu' in the following way.



Let us denote the following abbreviations thus

MB=mother's brother.

WB=wife's brother.

WF=wife's father

MBZ=mother's brother's son.

HF=husband's father

HB=husband's brother.

Capital letters denote males, small letters females, e. g. X brother, x sister; A, brother, a, sister etc.

Here MB of X, =A, =wife's brother of X₁ (WB)

(when X can marry his father's widow)=WF when X, can marry the daughter of his mother's brothers.

MBZ=M=WB of X₁ when X₁ marries his mother's brother's daughter. So MB, MBZ, WB, WF all denote one relation and thus are represented by one term 'Angu'.

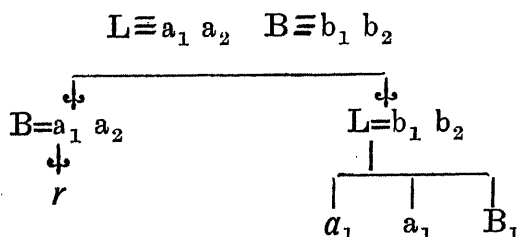
X=Y=apu=HB of a₂

But X=HF of a₂

Therefore, HB and HF have been denoted by the common term 'angu'.

But in case we admit that there was a dual

system as the basis of the Sema social structure, let us see how we can get out the desired result.



Let $L, \bar{a}_1 \bar{a}_2$ } represent brothers and sisters
 $B_1 b_1 b_2$ } respectively,

and let us suppose that B man marries 'a' woman and L man 'b' woman and the issue of the first match is R boy and those of the second pair are d, a, b, the small alphabets denoting females. If now R marries a_2 , the widow of his deceased father, L who was the mother's brother of R becomes his wife's brother. As R can marry his cousin, L who was his MB is identified with W. F. of R. R's wife's brother and sister of d, R. a, becomes now.

It will not be out of place to mention one fact relating to the social position of the mother's brother in a Sema society. The mother's brother of a Sema is highly respected and the mother's brother has to give a present to the husband of either the man's sister's daughter or the man's father's sister's daughter after the death of his father. The husband in either of the cases has to return the present—this custom is known as 'aghasahoo'. The origin of this custom may be due to a stage of society in which descent was matrilineal and the children were brought up in

the maternal uncle's family. Although the descent has been changed into a patrilineal one the mother's brother has to pay something to the husband of the niece as an obligation. The husband also when he takes away the bride to his own house, does not like to remain under the obligation and thus pays back the present in time. The case of the father's sister's daughter is a bit different. The custom of marrying the widow of the deceased father places the man in the position of his own father and the father's sister is looked upon as his own sister and necessarily he has to offer the same present to her daughter which had his father been living he would have to pay. People in eastern Bengal observe a similar custom which might be traced to a time when descent was matrilineal and the nephews inherited the property of their maternal uncles. We all know that an orthodox Hindu observes the *चन्द्रमाशन* or first rice-giving ceremony when a child begins to wean, and the first offering of rice to the child is celebrated by a feast and is better known as the rice-giving ceremony. I cannot here go into the details of the ceremony; all that I have to mention in this connection is that the customary feeding of the first grain of rice has to be made by the maternal uncle of the child. Now, why does a maternal uncle offer the first grain? Can it not be a survival of a time when descent was matrilineal and children lived in the family of their maternal uncle? It was the maternal uncle's duty to maintain the family of his sister; and the nephews who had a right to inherit the property of their maternal uncle had also an

obligation to take the first grain of rice from the hands of their maternal uncle. If so, this is a case of survival.

Then we come to a second instance. The *Semā Nāgās* use the term 'apu' to mean—

- 1) Father,
- 2) Father's brother,
- 3) Mother's sister's husband.

In explaining this use of 'apu' we should bear in mind that a Sema may marry his mother's own sister—so the difficulty is reduced to a minimum. When a Sema marries the widow of his deceased father he gets to the position of his own father and as he can marry his mother's own sister, the mother's own sister's husband is also identified with him. The father's brother of a Sema inherits the property of his father where his father leaves behind young children only and in this case the father's brother takes up the position of father. So the Sema term 'apu' is used to denote all the three relations.

The identity of relationship existing between

- 1) Mother,
- 2) Father's brother's wife,
- 3) Mother's sister,

which are all denoted by the term 'aza' will be apparent from the following reasons. A Sema may marry his mother (widow of his deceased father), his father's brother's wife and his mother's sister. So the term 'aza' denotes all three relationships named above (A Sema is entitled to marry his father's brother's widow).

The term '*ani*' is used to denote

- 1) Father's sister, *FS*.
- 2) Wife's mother, *WM*.
- 3) Husband's mother, *HM*.
- 4) Husband's sister, *HS*.
- 5) Husband's brother's wife, *HBW*.

Fig 1

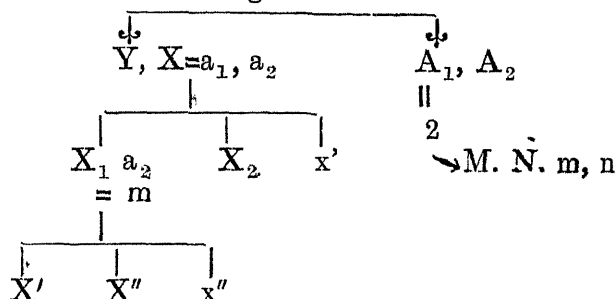
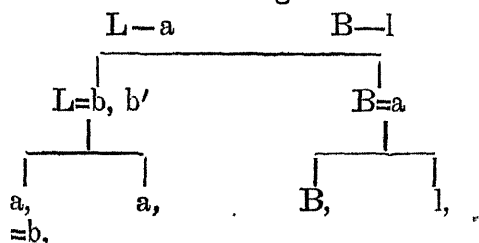


Fig 2



If L , marries b_1, a who was the Father's sister of L , becomes L 's wife's mother; b who was the father's sister of b , now becomes her husband's mother.

But how can we explain the identification of husband's sister and husband's wife with father's sister or husband's mother? This is clear when we refer to the custom of marrying the deceased father's widow. a , who is the sister of

L, the husband of b, may be identified as the sister-in-law of b—but b is also the husband's mother of b_1 :—so a, who is the sister of L, may be identified with the mother-in-law of b_1 . Similarly husband's brother's wife also becomes a mother-in-law. Thus we can account for the use of the term 'ani'

to denote 1] father's sister,

2] wife's mother,

3] husband's mother,

4] husband's sister,

5] Husband's brother's wife.

No specific term is used for the following relations; either the personal name is employed or some colourless expression such as 'friend', 'ashau', etc, 'lad', 'āpu', or the respectful 'afu', 'amu', 'aza', etc. according to circumstances:—

Daughter's husband,

Son's wife's parents,

Daughter's husband's parents,

Wife's brother's child,

Wife's sister's child,

Mother's sister's child,

Sister's daughter's husband.

This is due perhaps to the poverty of the language the Semas speak. Besides, the Semas have a very low idea of consanguinity. So the relations, one generation down from the speaker are treated as friends—or strangers.

The Semas as well as the Angamis will not utter their own names or those of their husbands or wives. They can take any name save and except those of themselves and their wives or

husbands. Now, how can we explain this? Mr. J. H. Hutton writes about this custom—"The Angami has exactly the same delicacy about mentioning his or her name and that of wife or husband, as the case may be, though with the Angami too, the feeling is rapidly weakening. It is a curious fact that the excuse given by the Angami for his reluctance to mention his own name is that he would be like an owl which is always repeating its own name (*huthu*). This notion is exactly paralleled by the same notion found in the Philippine Islands, though there the bird the example of which is shunned is a raven instead of an owl (*Golden Bough*, 3rd Edition, Vol III Page 329; *vide* Hutton's *Semā Nāgās*, Page 143. foot note 2).

The hesitation of a Sema to utter his or her name, as well as the names of her husband or his wife admits of another explanation which I would like to suggest here. If we go back to primitive societies we will find that there was a time in every society where marriage by capture was the rule and not the exception. Vestiges of this form of marriage can be found in many societies. It is held by some authorities that every society passed through this stage of marriage by capture. The origin of marriage by capture has been dealt with very variously by competent authorities and I shall here go into the intricacies involved in it. When the woman was brought home as a captive either in war or predatory excursions the woman would have necessarily

an aversion to the man or woman who used her as a captive, separated as she was from all that were near and dear to her, and so it is no wonder that the woman would hesitate to utter the name of her captor or of the mother of the captor who would have some authority over her; with time the woman would be quite at home but this aversion might have a hold on her mind and she would hesitate to utter the names of her husband or her husband's mother. The coyness of the husband to utter the name of his wife may be a psychological reaction.

IV. "THE ETHNIC THEORY OF CASTE". *

By

G. S. GHURYE, *Ph. D. (Cantab.)*

Reader in Sociology, University at Bombay.

Caste is such an obtrusive factor of Indian social organisation that since the time of Megasthenes it has never failed to attract the attention of the foreigner—may he be a traveller, an administrator, or a student of Sanskrit literature. But the application of the sociological method to the explanation of caste, i. e. a systematic attempt to elucidate the genesis and growth of the institution of caste, by a comprehensive study of the contemporary castes—may be said to begin with the works of Sir Denzil Ibbetson and J. C. Nesfield. Both of them, in general, endorse the view ¹ that caste is mainly occupational in origin, i. e. occupations which were organised into guilds slowly became exclusive and stratified into caste. Nesfield went further and, affirming the essential unity of the Indian race, emphatically denied that racial distinction was the basis of caste. ² This extraordinary statement of Nesfield led Sir Herbert Risley to use anthropometry for the solution of the riddle of caste; for that alone could decide questions of racial affinity. ³ He carried on extensive measurements on many of the castes of

* *This is one of the four papers approved by the Cambridge University for the degree of Ph. D. in 1923.*

¹ Risley (1) pp. 263-65.

² Ibid. p. 265; ³ *ibid.* p. 20.

Northern India and published the results of his splendid work in two volumes entitled "*Anthropometric Data from Bengal*" (1891). The bearing of these data on the theory of caste he discussed in the introduction to his "*Tribes and Castes of Bengal*" and later on in "*The People of India*". His work further led to a succession of monographs on the anthropometric data from other Indian Provinces as a part of the ethnographic survey of India.

In any anthropometric work the student is, at the very outset, faced by two problems. The first is the question of the unit; what shall we take as a unit on which measurements may be taken and compared? Shall we take a geographical or political area as our unit and compare one with the other? Or shall we take a whole people, take our measurements on them and then analyse them? The solution of this problem is very fundamental to anthropometric work. But as our main purpose is to institute comparisons between castes this problem need not trouble us. We may take one caste as a unit and compare it with another. This procedure does not involve the acceptance of Risley's view about the isolation of castes, which, as pointed out by his learned annotator, Dr. W. Crooke, ⁴ requires much modification. We may, thus, take our measurements on Brahmins and compare them with those on Chamar. But the data show us that neither Brahmins among themselves from various provinces of India nor Chamars

⁴ *ibid.* p. XVII.

among themselves show a uniform physical type. We ask ourselves the reason of this and we are led into the question of the origins of the different physical types. Thus we have to deal with the general ethnology of India as, indeed, Sir Herbert Risley did. Hence we have to analyse racial mixture as well as compare different castes. This opens up the second problem, viz. what is the method by which we can detect various racial affinities and compare groups? For analysing race-mixture Prof. Ripley mainly depends on the frequency-curves. Thus he plots curves for the cephalic index of Lombardy, Sicily, and All Italy and remarks, ⁵ "It will be observed, however, that even this curve for highly complex people preserves vestiges, in its minor apexes, of the constituent types of which it is compounded. Thus its main body culminates at the broadened head form of the Alpine race; but a lesser apex on the left-hand side coincides with the cephalic index of the Mediterranean racial type; that which entirely dominated in the simple curve for Sicily alone". That Prof. Ripley put too much faith in the value of such simple inspection of the frequency-curve is proved by the erudite work of Prof. A. Thomson and Dr. Randall MacIver on a large series of Egyptian skulls. They plot not only the curve of frequency, "which is a graphic representation of the actual results got by the observation of a series of examples", but also the curve of probability, i. e. a curve which "would

⁵ Ripley, p. 115.

have been obtained in the same manner and on the same scale if the observations had strictly conformed to the Law of Errors". They further compare the curve of frequency with the curve of probability to see how far the former fits in with the latter and thereby to decide whether their series is homogeneous or heterogeneous. After elaborate calculations they fail to detect any racial mixture in their series. Only an examination of the skulls enables them to detect the mixture. On the value of the frequency curve they observe, "It is possible to obtain what appears to be a pure curve by the blending of two or more curves" ⁶ In pl. 1 I have plotted a curve for nasal index for Bombay, having pooled together nine castes: Chitpavan, Desasth, high-caste *Marâṭhâ*, *Kunbi*, *Mahâr*, *Marâṭhâ Ghâṭi*, *Prabhu*, *Sônkôli* and *S'envi*. The individual index, omitting a few scattered individuals, varies from 58 to 93. As for the groups, the index ranges from 7145. among the High-caste Maratha to 8223. amongst the Mahar. Yet the form of the curve is such that one cannot definitely say by mere inspection that the curve is an impure one. Mere inspection of the frequency curve, therefore, is not a safe guide for the analysis of racial mixture. Mr. L. H. Dudley Buxton, in his recent work on the anthropology of the Eastern Mediterranean uses another statistical device to ascertain whether the difference between any two means is "significant" or not. Together with the means he has calculat-

⁶ *The Ancient Races of the Thebaid*, pp. 68-9, 74-78.

ed the probable errors of the means. The probable error of the difference between any two means is obtained by taking out the square root of the sum of the squares of the probable errors of the two means. When the difference between two means is more than three times the probable error of the difference, the deduction is that the two are not samples of the same population. ⁷ "The first objection against this method is that the phenomena for which the statistician has devised his formulæ are in general of a different order to those we have to deal with in the analysis of racial mixture. In this connection it is well to remember what Prof. Thomson has observed. He says, "We cannot, then, regard it as yet demonstrated that the Law of Errors expresses the distribution of most characters in mankind". ⁸ Here are some of the figures that I have selected from Dudley Buxton's paper in *Biometrika* ⁹ to illustrate to what results this statistical method leads us :

Mean Cephalic Index with probable error:

Crete (Hawes) 79.20 ± 07 ; Alexandria, 76.29 ± 08
Giza 74.75 ± 11 ; Cyprus (II), 81.94 ± 13 ; Cyprus (four groups combined) 82.54 ± 11

I compared the pairs: Crete and Alexandria, Alexandria and Giza, and Cyprus (II) and Cyprus (all). The differences between their mean are respectively ; 2.91, 1.54, and 60. Using Buxton's method I found that the first two differences are far greater than three times the probable error of the

⁷ J. R. A. I, 1920, p. 194-5; ⁸ op. cit. p. 76; ⁹ vol. XIII, p. 97.

difference, while the third figure is just greater than its probable error. On this method, therefore, groups differing from one another by such small differences in their cephalic index will have to be regarded as belonging to a population which is not homogeneous.¹⁰ Now when the ethnologist classifies peoples into dolichocephalic, mesaticephalic, and brachycephalic, with the index varying from 70 to 75, 76 to 80, and 81 and upwards respectively, he allows differences far greater than those observed in our comparisons, as being mere variations from the same physical type. Hence the statistical formula, used by Buxton is not very useful for the detection of racial mixture. Thus we are left without any accredited method for dealing with race-mixture. But this is not a serious handicap for my work; because in India the segmentation of society into castes and the fact that some of the jungle-tribes, owing to their geographical environment, have preserved for us physical types in comparative purity, the problem of racial analysis is rendered relatively easier. Again the formula that I am going to use helps us somewhat to distinguish between various racial types.

For comparisons between groups, the average has long been in use. Risley principally used the average for his work, rarely bringing in the seriations and still more rarely the absolute measurements.¹¹ Seriations, like the frequency curve, only serve the purpose of showing the actual

¹⁰ J. R. A. I. 1920 p. 201.

¹¹ *op. cit.* p. 37;

distribution and cannot be conveniently used for purposes of comparison, a fact which explains the rare use of these by Risley when actually dealing with the types, though they are given in the appendices. The average without the standard deviation is an abstraction which tells us nothing. The standard deviation is very useful both as serving the basis of the formula that I have used for comparison, as well as giving us an idea of the actual range of variation; for "a range of six times the standard deviation usually includes 99 per-cent or more of all the observations in the case of distributions of the symmetrical or moderately asymmetrical type".¹² I have, therefore, given in the appendix means and the standard deviations for selected castes. It will be observed that for the Punjab and Gujerat we have only meagre data; for Sindh proper we have none. For Madras, E. Thurston¹³ has given us a long list of averages but very few individual measurements. Hence in case of Dravidian India I can compare only two castes, data for which are taken from the paper of Sir Thomas Holland. Though I accept Thurston's averages for the general ethnology of India yet I must point out that they are very crude in so far as the absolute measurements seem to have been recorded in centimetres.¹⁴ For more scientific conclusions about Dravidian India we require fresh measurements taken on typical Dravidian castes. When

¹² Yule: "An Introduction to the Theory of Statistics", (1916) p. 40.

¹³ vol. I. pp. lxi; ¹⁴ *ibid* p. lv and lxi.

we compare two groups what we want to know is not merely the differences between the two groups as regards the cephalic index or nasal index separately but we want an expression which conveniently sums up all the differences in various attributes that we may like to compare. Such an expression was used by T. A. Joyce in 1912. In order to compare two groups he starts with one character, say, the cephalic index, and works out the

$\sqrt{\frac{M_1 - M_2}{\sigma_1^2 + \sigma_2^2}}$ — fraction where M_1 and M_2 are the

means for the cephalic indices of the two groups, $M_1 - M_2$ is their difference without regard to sign and σ_1 , σ_2 are the standard deviations. Similar fractions are found for as many characters as one likes and all of them are added together. This sum is called the "Differential Index".¹⁵ The expression is a convenient quantity showing the actual differentiation of two peoples and can be fruitfully used for comparisons. Another great advantage of this expression is that by its help we can include for comparison absolutes like the cephalic length, which have, unfortunately, been too much neglected in anthropological work. Further this item is of special importance in the field of Indian ethnology; for here we have sometimes to deal with two dolichocephalic peoples whose absolute measurements of the head are essentially different. Thus the Chamar of the United Provinces has a cephalic index of 72.90, while the cephalic length and cephalic breadth are

¹⁵ J. R. A. I. 1912, p. 451.

185.18, and 134.98. The corresponding figures for the Chhatri of the same province are: 73.12, 188.35, 137.68. I have given in the appendix the differential indices for selected castes. In the sequel I shall attempt to attack the problem of caste with the help of this index. The one disadvantage of this index is that it hardly seems possible to give an expression for the probable error. No such expression is given by Joyce; and G. U. Yule informs me that he does not see his way to a workable expression in which any confidence can be placed. The case is not a simple one, as the component indices cannot be regarded as statistically independent. The following rough consideration may be of some service. If there are n observations in each group $\frac{M_1 - M_2}{\sqrt{\sigma_1^2 + \sigma_2^2}}$ is $\frac{1}{\sqrt{n}}$ times the ratio of the difference of the means to its standard error. Hence if $n = 100$, as in most of my cases, a value 0.6 of the index for six characters corresponds to an average difference between the means. I have said above that it was the genius of Risley that, under special circumstances, applied anthropometry to the solution of the problem of caste. But owing to the method which he followed the light that he was able to throw was not as decisive as it was expected. Again he devoted more attention to the classification and origins of the various physical types of India than to the problem of caste proper. It was under the kind encouragement of Dr. Rivers that I made up my mind to revise the subject. Unfortunately I was never able to

show my results to him. Before detailing my conclusions I must state as clearly as possible the problem that I attack with the help of anthropometry.

What are the criteria of caste? Are certain restrictions on social intercourse, e. g. in the matter of food and contact sufficient test of a caste? If a group refuses to accept food from or thinks itself defiled by the contact of another group shall we regard them as castes? That by themselves these restrictions do not constitute caste will be readily granted by those who know anything about Indian castes. At the same time it is true that these restrictions are one of the items of the sentiment of caste in practice, i. e. a caste in general in addition to restricting the choice of a mate to its own members will or will not accept food from another caste according as it stands lower or higher than the latter in the social hierarchy. But regulations on this head are vastly variable in the different cultural regions of India. Thus, in Southern India a Brāhman does not accept food from any one who does not belong to his own caste; in Northern India, on the other hand, he usually has no objection to taking food cooked in milk from some castes. The same holds true for other castes. Clearly, then, though the regulations of food and contact are one of the attributes of caste in practice, they are not one of the most uniform; and if we have to choose one dominant characteristic of caste to the exclusion of others, our choice cannot fall on them. Further, the

origin of these restrictions cannot be solved by anthropometry ; it is a problem for cultural analysis. We know that they were in their infancy in the time of the Dharma-Sutras. ¹⁶

Perhaps hereditary occupation may be considered as an adequate test of caste. Shall we regard a group, practising a particular occupation, whose membership is hereditary, a caste? The question is worth investigating because many Sanskritists, while giving a historical treatment of the subject, have aimed at proving that the four classes,—Brahmin, Kshatriya, Vaisya, and Sûdra,—were closed corporations with hereditary occupations in order to establish that they were castes. ¹⁷ If we look to the institution of caste in contemporary India, from which alone we can study the proper attributes of caste, hereditary occupation is the characteristic of only a few castes. The Brāhman has successfully held the monopoly of his profession ; while at the lower end the Chuhra, the Bhangi, the Mahar, the Paraiyan have been severely left alone because of the uncleanly nature of their occupation. Between these two ends, other castes have been fairly mobile in their occupations ; at least, there has been no social bar against any occupations. It is this unobtrusive nature of occupation in the scheme of caste-organisation that led, as pointed out by Senart, ¹⁸ an Indian scholar to completely neglect occupation in his treatment of caste. In this connection, I must

¹⁶ The Cambridge History of India, p. 234 (Ancient period.)

¹⁷ cf. Vedic Index, vol. II pp. 247 ; ¹⁸ I. A., 1912, p. 108.

point out that the influence of the family, apart from any social regulations, in making occupation hereditary does not seem to have been taken into consideration. Thus the son of a carpenter may take to the profession of his father not because society prevents him from following other occupations but because, under the circumstances, he finds it easier to serve his apprenticeship to his father. There being no public provision for training in professions, it appears to me that many of the occupations that have been hereditary have been so owing to the influence of the family and not because of any social restrictions. In past times the same appears to have been the case. In Vedic times, though perhaps the Brāhman class and the Kshatriya class had hereditary professions, the Vais'ya and the S'ūdra seem to have the choice from amongst a medley of occupations.¹⁹ In Buddhistic times all the classes seem to have been mobile as regards their professions.²⁰ The priestly profession must have been a preserve even then. The evidence of the Epics points in the same direction.²¹ Hence we cannot grant the hereditary nature of occupation as a sound test of caste. A group with a hereditary occupation is a guild with a difference but it is not a caste. To prove it to be a caste we must adduce proof for another attribute, viz. endogamy.

Endogamy appears to be the best single test

¹⁹ Vedic Index, II", pp. 248; ²⁰ The Cambridge History of India, pp. 209—10.

²¹ cf. Prof. Hopkins in the *Journal of the American Oriental Society*, vol. XIII.

of caste. Indeed, Westermarck considers it to be the essence of caste. ²² It is the most general characteristic of caste with a few exceptions which only prove the rule. The exceptions I refer to are the cases of hypergamous marriages between different castes. I think that the authentic cases of such marriages are reported from the Hill States of the Punjāb, where, as the popular adage goes, a woman of the Ghirth caste, for example, can marry in a higher caste; her daughter can marry in a still higher caste so that the woman's progeny in the seventh generation, if a female, can aspire to be a queen. ²³ The other well-known case of sexual relations between the Nambudiris and the Nayar women need not disturb us, for it can hardly be called marriage. ²⁴ Hence we have every reason to hold that endogamy is the most general attribute of caste. It may be objected that endogamy being also the characteristic of sub-castes they will be raised to the position of castes. To this it must be replied that "As a rule, the prohibition of intermarriage between members of the different sub-castes is far less rigid than it is between members of different castes; and, when the rule is broken, the penalty is usually not expulsion, but merely some form of atonement". ²⁵

²² *The History of Human Marriage*, vol. II p. 59.

²³ H. A. Rose: "*Tribes and Castes of the Punjab*", II, p. 289,

²⁴ cf. K. M. Panikkar, in J. R. A. I. 1918, p. 269-70,

²⁵ Ency. of R. and E. "Caste" p. 232 (b)

Now the problem can be easily stated. It is a historical fact that peoples calling themselves "Aryans" poured into India through the North-West somewhere about 2000 B C. It is equally well known that an institution closely akin to caste has been very often described in Sanskrit books which are the works of either the Aryans or the Aryan-inspired aborigines. Can we trace a close connection between the immigration of the Aryans and the rise of the institution of caste? That is the problem before us. If we can give any answer as regards endogamy then we shall have gone far towards a solution of the problem; for as I have tried to show endogamy is the principal attribute of contemporary caste. How did endogamy arise on the Indian soil? Did the Aryans, impelled by a desire to keep themselves free from any aboriginal blood, create it? To this question, if we make certain reasoned assumptions as regards the physical type of the Aryans and the aborigines, anthropometry ought to give us a clear answer; for if the Aryan imposed endogamy, as the institution of caste arose in Hindustan proper, we ought to find the physical type of the representatives of the Aryans in that region approximating to the assumed physical type of the Aryans.

I said above that anthropometry can be brought to bear on our problem only on certain assumptions. Before dealing with the conclusions, therefore, I must explain these assumptions. The assumptions are two: first, that the Aryan type

may be described as long-headed and fine-nosed. The average cephalic index may be said to vary between 70 and 75 and the nasal index from 65 to 75. The ground for this assumption is that almost all the averages of cephalic index and the nasal index given by Risley ²⁶ for the castes of the Punjab and Rajputana fall within these ranges; and these are the regions which, from their geographical position, must have been the Aryan settlements. We may reasonably hold, therefore, that the predominant physical type of the Punjab and Rajputana represents the Aryan type. The second assumption is that the aboriginal type may be deduced from such peoples as the Musahar, who not being within the pale of Hinduism are like the jungle-tribes of Southern India. The chief characteristic is the broad nose, the nasal index, being above 80. Very often the head is long; it is essentially distinct from the Aryan head in its absolute measurements. The broad nose seems to have been noticed even by the Vedic poets as a characteristic of the aborigines, whom they sometimes describe as "noseless". ²⁷

We can now proceed to set out the conclusion we get from our anthropometrical inquiry. Taking the *Brahman* of the United Provinces as the typical representative of the ancient Aryans I shall start my comparisons with him. If we turn to the table of differential indices we find that he

²⁶ op. cit. appendix, III. p. 396.

²⁷ Vedic Index, vide "*Dasyu*".

gives a less differential index ²⁸ as compared with the Chuhra of the Punjab than when compared with any caste from the United Provinces except the Chhatri. The same is the case as regards his differential index with the Khatri of the Punjab. This means that he has closer physical affinities with the Chuhra and the Khatri of the Punjab than [with any caste from his own province except the very high caste of the Chhatri. The differential index between the Khatri and the Chuhra is only slightly less than that between the *Brāhman* of the United Provinces and the Chuhra. The *Brāhman* is as much akin to the Chuhra as the latter is to the Khatri of the Punjab. The only valid conclusion is that the U. P. *Brāhman* does not materially differ from the physical type of the Punjab, i. e. on the assumptions previously explained, he fairly represents the physical type of the Aryans. The reality of this close affinity between the U. P. *Brāhman* and the Punjab Chuhra is more clearly brought out if we look to the table of differential indices between the U. P. *Brāhman* and the *Brāhmans* of other regions. They are very high as compared with that between the Chuhra and the U. P. *Brāhman*. Even the differential index between the U. P. *Brāhman* and the Bihar *Brāhman*, who, from what we know about the history of the spread of Aryan culture, is expected to be very nearly allied to the former, is just twice as high as that between the U. P.

²⁸ I have used only those differential indices which are based on six characters.

Brāhman and the Chuhra. This ought to serve as a conclusive proof of the fact that the U. P. *Brāhman* has essentially the same physical type as that of the Punjabis and of the Ancient Aryans. Now we must examine in what relation the U. P. *Brāhman* stands to the other castes of his province. From the table of the differential indices for the United Provinces we see that in physical affinity to the *Brāhman* the Kayasth and the Kurmi stand next to the Chhattri while at the other end of the scale come the Pasi and the *Chāmār*. In the scheme of social precedence, the *Kāyasth* belongs to the fourth rank, the Kurmi stands at the head of the eighth while the Pasi and the *Chāmār* take the eleventh and the twelfth rank. ²⁹ The true significance of this gradation in physical affinity to the *Brāhman* can be demonstrated by the study of the other provinces. On historical grounds we expect Bihar to approximate to the United Provinces. On referring to the table we find that the Kurmi comes near to the *Brāhman*, and the *Chāmār* and the Dom stand much differentiated from the *Brāhman*. But the *Chāmār* in this case is not as much distinct from the *Brāhman* as the U. P. *Chāmār* is from the U. P. *Brāhman*. The social status of the Kurmi is defined by stating that he ranks third while the *Chāmār* and the Dom rank fifth and sixth, i. e. the last. ³⁰ Thus in Bihar the state of affairs in some way corresponds to that which we have tried to

²⁹ United Provinces Census Report, 1901 pp. 248.

³⁰ Bengal Census Report, 1901, pp. 373.

demonstrate for the United Provinces. The table for Bengal shows that the same conditions do not prevail there. The *Chandāl*, who stands sixth in the scheme of social precedence and whose touch pollutes, ³¹ is not much differentiated from the *Brāhman*, from whom the *Kayasth*, second in rank can hardly be said to be distinguished. The gradation observed in the United Provinces is thus absent in Bengal. Still more is this the case in Bombay. Here the Desasth *Brāhman* bears as close an affinity to the Sônkôli, a fisherman caste, as to his own compeer the Chitpâvan *Brāhman*. The Mahâr, the untouchable of the Marathi region, comes next together with the Kunbi, the peasant. Then follow in order, the *S'envi Brāhman*, the *Nâgar Brāhman* and the High-caste-Marâthâ. These results are rather odd. Stated in a generalised form they mean that there is no correspondence between social gradation and physical differentiation in Bombay. I venture to think that the results from Bengal would have been equally striking if we had data for the various sub-castes of the *Brāhmans*. This contention is rendered plausible by some measurements recently given by Chanda. ³² The following are the means and the standard deviations :

	Cephalic Index		Nasal Index	
<i>Brāhman</i> (31)	78.84	3.64	75.61	10.31
Paschatya Vaidik				
<i>Brāhman</i> (50)	79.83	3.56	71.97	8.62

³¹ *ibid.* pp. 369.

³² pp. 255-7.

With such differences between the two sub-castes of the *Brāhman*s of Bengal we have reason to expect more startling results than what we have, though these are quite significant.

Our survey of the regions of India other than Hindustan has made it abundantly clear that Hindustan is unique in this respect that here we have the *Brāhman* as the top-caste, then follow one high caste or two, hardly differing from him in physical type; then comes a group of castes, little differentiated from the *Brāhman*; low castes like the *Chāmār* and the Pasi, whom we may look upon as the Hinduised representatives of the aborigines, being far removed from him. I have tried to show that the U. P. *Brāhman* retains the Aryan physical type. As one section of the Aryans calling itself the *Brāhman*s has succeeded in keeping itself free from aboriginal blood while between it and the representatives of the aborigines there are intermediate types, the conclusion is inevitable that the immigrant Aryans of Hindustan tried to impose on themselves endogamous rules, but only a section carried them out, others mixing with the aborigines to a greater or less extent. Endogamy in India then is racial in its origin but the causes of its general practice must have been different—cultural and psychological. They are not the subject of our present inquiry.

A general question directly arises out of our conclusion. Can we say that where two distinct races meet endogamy is likely to arise? The anthropological history of Europe can throw much

light on this question; but I shall confine myself to the Indian evidence. When a people meets another it perceives its racial distinction firstly by colour and secondly by the shape of the nose in a broad sense and not by the other racial traits which the anthropologist investigates. Hence we need take for consideration only those cases where two peoples with great difference in the colour of the skin and the shape of the nose have come in contact with one another. There exists at least one such case in India. As I shall show in the last part of the paper, in the southernmost part of India a people, described as the Pre-Dravidians, characterised by a very dark complexion and a very broad nose has met another, members of the Brown Race of Prof. Elliot Smith, characterised by a brown complexion and a medium nose. We have no reason to think that as a result of the interaction of these peoples endogamy arose. We must therefore seek for additional causes that led to the rise of endogamy in Hindustan. These are to be found in the psychological factor. The Aryans, whether in Europe, Iran or India, seem to have been a particularly proud people. The Indian Aryans refer to themselves as the "Noble Colour" and to the aborigines as the "Dark Colour". They heap indignities on the speech of the latter.³³ This colour consciousness appears to be a potent factor in the rise of endogamy. We may therefore answer the question raised at the beginning of this paragraph thus: when two

³³ Vedic Index, vide "Varna".

peoples, sharply distinguished in colour, one of whom at least is conscious of its superiority meet, endogamy is likely to arise, if there are no counteracting circumstances.

I shall now turn to the conclusions arrived at by Risley. Believing in the "marked divergence of type that distinguishes the people of the Eastern Punjab from the people of Western Hindustan,"³⁴ to account for the people of Hindustan he brings in a second wave of the Aryans with few or no women. They had to marry the aboriginal women. They thus modified their original type "but a certain pride of blood remained to them, and when they had bred females enough to serve their purposes and to establish a distinct *jus connubii* they closed their ranks to all further intermixture of blood. When they did this, they became a caste like the castes of the present day."³⁵ I have tried to indicate that as far as the published data go the Hindustani Brāhman does not materially differ from the physical type of the Punjabis. The "Two Invasions Hypothesis" based on the erroneous belief of Risley about the differences of racial type between the Hindustanis and the Punjabis I shall examine later. The theory about the origin of endogamy, stated in the above quotation from Risley, is too arbitrary to need scrutiny; I think it stands self-refuted.

There is another proposition of Risley's which I must examine more minutely, for it is one which

³⁴ op. cit. p. 56.

³⁵ op. cit. pp. 274-5.

if true to facts affects my conclusion. He observes, "If we take a series of castes in Bengal, Bihar, the United Provinces of Agra and Oudh, or Madras, and arrange them in the order of the average nasal index so that the caste with the finest nose shall be at the top, and that with the coarsest at the bottom of the list, it will be found that this order substantially corresponds with the accepted order of social precedence".³⁶ In the argument elaborated above it is evident that I depend upon the uniqueness, amongst the provinces of India, of Hindustan as regards the gradation of the physical type for my explanation of the origin of endogamy. The statement of Risley in a way challenges that basis. For Bengal and Bombay I think I have made a good case and my figures will speak for themselves; but as regards Madras, for lack of material, I have not been able to apply the formula for differential index. It may be urged against me that as far as nasal index, without the absolute measurements of the nose, can be an indication of racial mixture, Madras seriously damages my argument. I shall therefore examine the association between nasal index and social status province by province. Risley after comparing the nasal indices of some of the castes of Hindustan says that the order of gradation established by means of the nasal index is "substantially" the same as that of social precedence.³⁷ This mild statement has been reproduced in an exaggerated form in an autho-

³⁶ op. cit. p. 29. ³⁷ op. cit. p. 40;

ritative book on ethnology. It is said in Ks'neae *Man Past and Present*, ³⁸ that the Hindustani type of the United Provinces has "a nose index exactly corresponding to social station". I shall presently show that Risley's statement is only partially true and that Keane's generalisation has no ground. Nor should we expect these propositions to be true in the form in which they are stated; for as it is likely that it is the absolute length or breadth of the nose that is inherited and not the anthropologist's ratio, all sorts of inequalities are bound to arise. The following is the order in which some of the typical castes of the United Provinces stand according to their nasal index as given in my table for the province: *Bābhan*, *Brāhman*, Chhatri, Kayasth, Kurmi, Tharu, Bania, Bhar, Kol, *Lohār*, Dom, Pasi, *Musāhār*, and *Chāmār*. The order of social precedence as given in the Census Report of 1901 (pp. 248) is as follows: *Brāhman*, *Bābhan*, Rajput, *Kayasth* Bania, Kurmi and *Lohār*, Mallah and Bind etc., Bhar and *Thāru* etc., Kol and Muchi etc., Pasi and *Dosādh* etc., *Chāmār* and *Musāhār* and Dom etc. To these I may add *Kāchhi*, Lodha, and Koiri; Risley's averages for them are: ³⁹ $82.9=83.4$, and 83.6 . In my list the first two will rank after Kol and the third after *Lohār*. But in the scheme of social precedence they are grouped together with Kurmi. These comparisons prove that the statement of Keane is baseless and that of Risley is true only in a broad sense.

³⁸ p. 546. ³⁹ op. cit. p. 400.

For Bengal Risley's averages ⁴⁰ give us the following order: *Brāhman* of Eastern Bengal, *Kāyastha*, *Brāhman* of Western Bengal, *Chandāl* and *Sadgop*, *Goālā*, *Muchi*, *Pōd*, *Kaibart*, *Rājbarsi*, *Kōchh*. These castes may be arranged according to social status as: ⁴¹ *Brāhman*, *Kāyasth* and others, *Sadgop* and others, *Kaibarta* and *Goālā*, *Bhuiya* and others, *Kōchh*, and *Pōd* and *Chandāl* *Muchi* and others. It is evident that these lists defy Risley's statement. From Risley's averages for Orissa some of the castes rank as below: ⁴² *Shashan Brāhman*, *Pāṇḍā Brāhman* and *Teli Khandait*, *Mastan Brāhman* and *Guria*, and *Chāsā*, *Karan*, *Pān Kewat*, and *Bauri*. The social order of precedence is: ⁴³ *Brāhman*, *Karan Khandait* and others, *Chāsā*, *Guria* and others, *Golā* and others, *Teli* and *Kewat* etc., *Chāmār*, *Bauri* and others, *Pān* and others. I leave out Bombay as it is not included in Risley's observation. By looking at the table the reader can satisfy himself that the figures are more telling than in the case of the provinces so far dealt with. Finally we come to Madras. Here we must treat of the different linguistic areas separately for the schemes of social precedence in the various areas are different. I shall begin with the Telugu region. According to the averages given by Risley (p. 398) and by E. Thurston, vol. I (pp. lxi) the order of castes is as follows: *Kāpu*, *Sāle*, *Gollā*, *Māla*,

⁴⁰ p. 401.

⁴¹ Bengal Census Report, 1901 pp. 369. ⁴² op. cit. p. 401

⁴³ Bengal Census Report, pp. 375.

Mádiga and *Togata*, *Komâti*. According to their social status they are ranked as below: *Brāhman*, , *Komâti*, *Gollâ* and *Kâpu* and others, *Sâle* and *Togata* etc. *Mâla* and *Mádiga* occupy the lowest rank, being the Pariahs of the Telugu country. ⁴⁴ In the Canarese region the nasal index gives the following order: *Karnâtak Smârta Brāhman*, *Bânt*, *Billava*, *Mândya* Brahmin, *Vakkaliga*, *Gâniga* Linga *Banajiga*, *Panchâla*, *Kuruba*, *Holeya*, *Des'asth Brāhman*, *Toreya*, *Bedâr*. In the scheme of social precedence the castes take the ranks: *Brāhman*, , *Bânt* and *Vakkaliga*, *Toreya* etc., *Kuruba* and *Gâniga*, *Badaga* and *Kurumba* and *S'olaga*, *Billava*, *Bedâr*, *Holeya*. ⁴⁵ The significance of the comparison is enhanced when we remember that the nasal index of the *Holeya*, the untouchable of the Canarese region, is 75.1—that of the highest sub-caste of the *Brāhman* being, 71.5—while that of the jungle *Kurumba* and the *Solaga*, who when Hinduised, occupy the rank allotted to them in the list, 86.1 and 85.1 respectively. The ranks of the *Linga Banajiga* and the *Panchâla* cannot be determined as they do not recognise the authority of the *Brāhman*. The Tamil castes may be arranged according to their nasal index as follows: *Ambattan Vellâl*, *Idaiyan*, *Agamudaiyan*, *Tamil Brāhman*, *Palli*, *Malaiyâli*, *Shānan*, *Paraiyan*, *Irula*, *Mâlāsâr*. The social status of these castes is *Brāhman*, *Idaiyan* and *Vellâla*, *Agamudaiyan* and *Palli*,

⁴⁴ Madras Census Report 1901. ⁴⁵ *ibid*.

Ambattan and others, Irula and *Mālāsār* and *Malaiyāli*, *Shānan* and others, Paraiyan. ⁴⁶ The nasal indices of four typical *Malayālam* castes are: Tiyan, 75; Nambudiri *Brāhman*, ⁴⁷ 75.5; Nayar, 76.7; Cheruman, 77.2. The order of social precedence among these is: Nambudiri, Nayar, Tiyan and Cheruman, both of whom last pollute without touch. The nasal index of the Kanikar, a jungle tribe of Travancore, is 84.6. Thus the Cheruman belongs to the same race as the *Brāhman* rather than to that of the Kanikar. I hope these comparisons will have made it abundantly clear that the proposition of Risley has very little basis in fact outside Hindustan.

I said above that the "Two Invasions Hypothesis" was based on an erroneous view of Risley about the physical affinities between the Punjabis and the Hindustanis; but in reality the theory was started by Dr. Hoernle to explain the peculiar distribution of the Aryan tongues of India. ⁴⁸ Risley only invoked its aid in order to explain his Aryo-Dravidian type, i. e. the physical type of the Hindustanis. ⁴⁹ Sir G. Grierson accepts the theory for his philological purposes adding the remark that the "contention is entirely borne out by the results of ethnological inquiries, that the inhabitants of the Midland represent the latest stage of Indo-Aryan immigration". ⁵⁰ According to this theory there were

⁴⁶ *ibid.* ⁴⁷ Rivers, "*The Todas*" p. 708.

⁴⁸ "*Grammar of the Gaudian Languages*" p. XXXII. ⁴⁹ *op. cit.* p. 55. ⁵⁰ Imperial Gazetteer of India vol. I, p. 358.

two waves of Aryan immigration into India. The first, entering India by the Kabul valley, brought their women with them and settled in the Punjab. The second swarm, "impelled by some ethnic upheaval, or driven by the change of climate in Central Asia", ⁵¹ had to make its way by the difficult route through Gilgit and Chitral and hence could not take their women with them. Finding Punjab already occupied they settled in the Gangetic Doab, and took the aboriginal women as their wives, thus producing the Aryo-Dravidian type of Hindustan. ⁵² The grounds for this theory are twofold: ethnological and philological. I shall first examine the ethnological arguments. First, it is contended that the physical type of the Hindustanis is essentially different from that of the Punjabis and this fact cannot be explained otherwise than on the above hypothesis. I have tried to show that this is a misconception and that some of the high castes of Hindustan are the result of a mixture of the Aryans with the aborigines in varying proportions, while the Hindustani *Brāhman* is fundamentally akin to the Punjabi Aryan. The Hindustani type, then, is exactly such as would arise from a mixture of the Punjabi type with the aborigines of Hindustan. The relative lack of the aboriginal blood in the Punjab is to be explained by the fact, as J. Kennedy has contended, that this part of the country was sparsely populated when the Vedic

⁵¹ Risley, p. 55. ⁵² *ibid.*

Aryans arrived. ⁵³ This contention is rendered probable by the comparative absence of the stone-age finds from this area. ⁵⁴ It is strengthened by the fact that the Aryans seem to have met the aborigines in considerable force only when they had reached the river Sarasvati, i. e. the Midland, of the Sanskrit writers. ⁵⁵ Again, the fact that the Hindustani *Brāhman* is such a pure representative of the Aryan disposes of the assumption that the Aryans when they entered Hindustan had no women with them. Secondly, to suppose that the second wave did not bring their women with them because of the difficulty of the route is to ignore both the psychology and the sociology of the pastoral peoples of Central Asia. These nomads, whenever impelled by an ethnic upheaval or by climatic change, seem to have always moved in large hordes, carrying their bag and baggage with them. A classic example of the migration of a pastoral people is furnished by the exodus of the Kalmuks from the banks of the Volga in 1771, which is graphically described by De Quincey. They numbered 600,000, and had to cross 370 miles of difficult country, peopled by hostile tribes, before they could reach their destination on the confines of Chinese Tartary. They left nothing behind them. ⁵⁶ The Aryans appear to have been a pastoral people. With their means of transport and their acquaintance of the steppe-land it is not

⁵³ J. R. A. S., 1919, p. 501. ⁵⁴ R. B. Foote, "*Indian Prehistoric Antiquities*" (1916) Map. ⁵⁵ *Vedic Index*, vol. I, p. 393.

⁵⁶ T. W. Atkinson, "*Travels in the Regions of the Upper and Lower Amoor*" p. 294.

likely that the Aryans should have left their women behind. Thirdly, the supposition that a people coming from the North into India took the route of Gilgit and Chitral has nothing to recommend it. The difficulties of this passage are so enormous, as pointed out by Sir T. Holdich,⁵⁷ that no people would have left the more natural route by the Kabul. Even if this latter part of the country were occupied by the previous wave of the Aryans, the new-comers would have more naturally gone southwards and entered India through Baluchistan, as, indeed, the later Sakas did.⁵⁸ Lastly as the newcomers are held not to have differed from the dolichocephalic Aryans of the Punjab it is worth while to investigate into the physical type of the Kās'mirian region; for, if they drove themselves like a wedge, they must have left some remnants in Kās'mir. The Chitrali are a brachycephalic people with 80.26 as the cephalic index.⁵⁹ Recently R. Chanda has given us some measurements of the Kās'miri Brāhmans, which are very important from our point of view. Out of the 35 subjects measured the cephalic index of 4 was 73.4—74.8; of 10, 80—85.4; the rest were "medium-headed";⁶⁰ It is clear that the Kās'miri Brāhman is distinctly mesaticephalic. This goes against the hypothesis of the dolichocephalic Aryans having passed through this region. Ethnology, therefore, does not support the theory of

⁵⁷ "The Gates of India" p. 518. ⁵⁸ *Cam. History of India* p. 564. ⁵⁹ J. R. A. I., 1912. p. 469. ⁶⁰ *Journal of the Dept. of Letters, Calcutta University*, vol. VIII. p. 305.

a second wave of Aryan immigration into India.

Now we have to inquire into the bearing of philology on this question. Sir George Grierson is the best exponent of the philological evidence and I shall start by stating his views. The present distribution of the Aryan tongues of India is somewhat as follows: there is a language in the centre, the Western Hindi, surrounded by a group of intermediate languages, and beyond these there are the languages of the Outer Band. The speakers of the Midland language must have been the latest comers who pushed the early settlers "in three directions, to the east, south and to the west."⁶¹ Tradition preserves some evidence of this cleavage between the two Aryan peoples. Thus the Sanskrit writers often refer to the Midland as the true home of the Aryans, the rest being looked upon as barbarians. Dr. Grierson speaks of the people of the Midland as having driven themselves like a wedge, though the present distribution of the Indo-Aryan tongues makes it clear that Western Hindi, the language of the Midlandic peoples,⁶² is not a wedge but an islet, hemmed in on all sides by the group of intermediate languages. The explanation of this inconsistency is to be found in the fact that Dr. Grierson early came under the influence of Dr. Hoernle's theory and has never been able to shake off its spell. This simile is used by Dr. Hoernle but in a setting in which it is quite appropriate. Dr. Hoernle divided the modern Indo-Aryan lan-

⁶¹ *Imp. Gaz.* vol. I, pp. 357-9.

guages into two groups, the Western *Gaurian*; comprising Western Hindi, Punjabi, Sindhi and Gujarati; and the Eastern *Gaurian*, comprising Eastern Hindi, Bengali and Oriya. He thought that the parents of these were two Prakrits, *S'auraseni* and *Māgadhi*. Further he connected Pashto and Kafiri, the languages of the extreme North-West, with *Māgadhi* in the remote past. Hence he regarded *S'auraseni* as a wedge driven in between the two portions of *Māgadhi*.⁶² It is evident that the simile is perfectly legitimate. But Dr. Grierson's great work has proved that the linguistic affinities of Pashto and Kafiri are quite different from those believed by Hoernle.⁶³ Again Dr. Grierson does not classify Lahnda and Sindhi with Western Hindi: but regards them as belonging to the group of Outer languages. It is clear, therefore, that the simile employed by Grierson is only a reminiscence. I draw attention to this point to show that being under the influence of Hoernle's theory Dr. Grierson's reasoning is a little bit biassed. This contention is corroborated by the fact that Grierson as early as 1884 accepted Hoernle's twofold classification of the Prakrits.⁶⁴ To turn to the grounds on which Dr. Grierson bases his theory of the Outer Band of languages, I do not think that he has made out a case for close affinities between Sindhi and Lahnda on the one hand and *Marāṭhi* and *Bengali*

⁶² Hoernle, "Grammar of the Gaurian Languages", pp. XIII, XIV, XVIII, XXXI, XXXIV. ⁶³ Imp. Gaz. I, pp. 353-6.

⁶⁴ Grierson, "Seven Grammars of the Bihari Language" p. 5.

on the other, i. e. between the Western and the Eastern groups of the Outer Band. On the other hand in one important characteristic, the past tense in "1", in which *Marāṭhi* and *Bengali* agree, Sindhi does not seem to fall in a line with them, though it is found to some extent in Gujarati. ⁶⁵ Dr. Grierson has pointed out some common features between *Marāṭhi* and the eastern languages like *Bengali*; but as he himself observes they are such as can be derived from the *Maharāṣṭri Prakrit*. ⁶⁶ We know that *Maharāṣṭri* was employed as the language *pār excellence* of Prākṛit poetry in the Sanskrit dramas. It may be that the eastern languages were influenced by *Maharāṣṭri* in these particulars. Again Dr. Grierson has pointed out some important links between *Marāṭhi* and Western Hindi, the central language. *Marāṭhi* agrees generally with the phonology of Western Hindi, ⁶⁷ while it does not possess the phonological peculiarities of the eastern languages like *Bengali*. ⁶⁸ The important item of three genders it retains in common with some rural dialects of Western Hindi. ⁶⁹ There are also other features in which *Marāṭhi* agrees with Western Hindi. ⁷⁰ Hence Prof. Gune observes, "The distribution of the vernaculars into allied groups is not as easy

⁶⁵ Census Report for India, 1901, p. 314.

⁶⁶ Linguistic Survey of India, vol. VII, p. 12.

⁶⁷ Linguistic Survey of India, VII, p. 12.

⁶⁸ *ibid.* vol. V pt. I pp. 6-8.

⁶⁹ *ibid.* vol. VII p. 10.

⁷⁰ P. D. Gune, "An Introduction to Comparative Philology," p. 234.

as it would seem at first sight. So many conflicting points of view are apt to crop up, that it will always be difficult to select some only as of first importance and neglect the others". ⁷¹ Thus we can understand why the grouping has been changing. We saw that Hoernle proposed to group the vernaculars into two classes. Grierson himself classed, in 1901, Gujarati and others with Western Hindi as the western group of the Inner languages ⁷² but in his article in the Imperial Gazetteer he regards Gujarati and others as Intermediate languages.

Even if the modern vernaculars lent themselves easily to the grouping propounded by Dr. Grierson it would not be reasonable to make inferences from them for the Vedic age for they are such a late growth. The evidence of the *Prākrits* is more trustworthy, because they are thought by philologists to reach back to the Vedic language. ⁷³ We have seen that Hoernle held that there were only two *Prākrits*, S'auraseni the language of the west, and Māgadhi that of the east. Dr. Grierson first accepted this classification. ⁷⁴ If this grouping were correct, then even if *Sindhi*, one of the modern vernaculars of Grierson's Outer Band, and *Gujarāṭi* of the Intermediate group, showed affinities with *Marāṭhi*, another vernacular of the Outer Band, we would not be justified in drawing any conclusion as regards the racial affinities

⁷¹ *ibid.*

⁷² Census Report India, p. 301.

⁷³ "An Introduction to Comparative Philology", p. 191.

⁷⁴ "Seven Grammars of the Bihari Language" p. 5 and Map II.

between the speakers of *Sindhi* and *Gujarāṭi* on the one hand and those of *Marāṭhi* on the other; for as the affinities are not traceable to the *Prākṛits*, which alone, as remarked, above, can give us any cogent evidence for the Vedic age, they must evidently have been due to cultural influences of later times. Perhaps it is the perception of this weakness that led Grierson to propose another grouping of the *Prākṛits* so as to fit in with the supposed relations between the modern languages of the Outer Band. He considers S'auraseni to be the Inner *Prākṛit* and classes together *Māgadhi*, *Ardhamāgadhi*, *Mahārāṣṭri* and "an unknown *Prākṛit* of the North-west" as the *Prākṛits* of the Outer Band.⁷⁵ The most patent weakness of this classification, is that it has to invoke the aid of an unknown *Prākṛit*. Another important drawback has been pointed out by Prof. A. C. Weelner. He remarks, "A weak point in the classification might appear to be the position of *Ardha Māgadhi*. Eastern Hindi does indeed lie between Western Hindi and the dialects of Bihar, and combines some of the peculiarities of the languages on either side; but in the case of the Prakrit *Ardha Māgadhi* this does not appear to be the case."⁷⁶ Further it must be noticed that the basis of the whole classification is seriously challenged by the fact that "*Mahārāṣṭri*, as far as we know it, hardly differs from S'auraseni except in striking phonetic variations".⁷⁷ Without

⁷⁵ Ency. Britannica, 11th. Ed., XXII, p. 251.

⁷⁶ "Introduction to Prakrit", p. 64.

⁷⁷ *ibid.*

entering into elaborate details I must emphasise one fact which is very awkward for the theory under consideration. It is this that *Mahārāṣṭri* follows rather the Vedic accent and S'auraseni the classical Sanskrit. ⁷⁸ According to the theory of Grierson the Midlandic newcomers were the peoples who developed the Vedic culture and the S'auraseni language; yet strangely it is one of the Outlandic languages that has retained the Vedic accent! The truth appears to be that the principal *Prākrits* have distinctive features of their own, which preclude the possibility of a reclassification". ⁷⁹ I hope this discussion will have rendered it quite clear that the evidence of philology on the question of the two waves of Aryan immigration is, to say the least, inconclusive. The problem must be settled by an appeal to ethnology which, as I have tried to show, does not countenance the hypothesis of two invasions of the Aryan people from the North.

I stated above that Dr. Grierson seeks support for his theory in traditions which point to a cleavage between the Midlandic and the Outlandic peoples. The traditions on which Dr. Grierson depends are the records of cultural differences and not reminiscences of racial distinctions. That even insignificant differences of customs may lead to derogatory references to others will be readily granted by those who know the social history of India. That minute customs were observed by

⁷⁸ Woolner, "Introduction to Prakrit" p. 26.

⁷⁹ Gune, "An Introduction to Comparative Philology" p. 106.

ancient writers is evident from a statement of Baudhāyana. He observes, that "to deal in wool, to drink rum, to sell animals that have teeth in the upper and in the lower jaws, to follow the trade of arms, to go to sea" were the peculiar customs of the north.⁸⁰ The disapproval of the peoples outside the Midland seems to have been actuated by the desire on the part of the dominant people of the Midland to impress a stamp of superiority on their own customs. This contention is borne out by the fact that such references first appear in the ritualistic works, known as the *Brāhmanas*, where some of the peculiar practices of the Easterners are referred to and condemned.⁸¹ Hence when some of the lawbooks refer to the peoples of the Outland as being of mixed descent we need not see in them reminiscences of racial distinctions; and Dr. Bühler has aptly observed that such passages "are intended to show that the customs prevailing in the countries named have no authority and must not be followed."⁸² The conception of the Midland also seems to have arisen on cultural grounds because it predominantly occurs only after the *Brahmanas*, where it gets a bare mention or two.⁸³ It appears that when the Aryans moved east the distinctive item of their culture was ritualism and therefore they looked upon the land where it was developed as the centre of Aryan civilisation, i. e.

⁸⁰ Sacred Books of the East Series, vol. XIV, p. 146.

⁸¹ Vedic Index, II, pp. 46 & 126 ;

⁸² S. B. S. E. XIV, p. 148 & foot note 13.

⁸³ Vedic Index, I, pp. 168.

the Middle land. It is on this interpretation alone that we can explain the changes in the extent of the Midland as noted in the Sanskrit works. Originally the Midland seems to have coincided with the country round Kuru-Kshetra.⁸⁴ It was just this region where the Brāhmanas were composed. But with the shifting of the centre of culture towards the east the boundaries of the Midland came to be extended so as to include this new area. Hence in the Code of Manu all the country between 74° and 82° E. longitude is designated the Midland.⁸⁵ The Buddhist Midland extended practically over the whole of Northern India, reaching as far as the Swāt valley.⁸⁶ Further tradition taken alone without its historical setting is apt to lead us to wrong conclusions. Thus F. E. Pargiter relying solely on the Puranic tradition comes to the extraordinary conclusion that the Aryans starting from near Allāhbād spread over Northern India and overflowed into Irān.⁸⁷ If there were no historical records we might as well have brought all the peoples of Europe from Palestine because they look upon Jerusalem as the Holy City! Indian tradition, therefore, cannot be interpreted to support the "Two Invasions Hypothesis".

R. Chanda, rejecting the theory of two invasions of the Aryans in the particular form in

⁸⁴ Vedic Index I p. 168;

⁸⁵ *ibid.* Map. & II p. 125;

⁸⁶ J. R. A. S. 1904 p. 91.

⁸⁷ "*Ancient Indian Historical Tradition*" pp. 295-302.

which it was proposed by Hoernle and others and wishing to account for the supposed relations amongst the various modern vernaculars, propounds another hypothesis, which may best be designated "Three Inroads Theory". He accepts the broad distinction between the Midlandic and the Outlandic peoples; but, in contradistinction to the other theory, he regards the former as the earlier settlers and the latter as the new-comers. The Midlandic peoples, who developed the Vedic culture, were composed of two migrations of the Aryans. One branch which was fair, entering from the North-west, settled in the Midland. The other section was rather dark in complexion. It came from Western Asia by sea, landed in *Kathiāwār*, and proceeding to the Midland fused with the fair section already settled. His Outlandic peoples he traces to an immigration of the people of Alpine Race. More specifically he connects them with the speakers of Tokharian in Chinese Turkistan. His Midland is wider than the Midland of Grierson.⁸⁸ It extends from Eastern Punjab to Benares.

For the migrations of and the distinctions within the Midlandic peoples Chanda depends upon Vedic traditions. But Prof. A. B. Keith, in reviewing Chanda's book, points out that no such evidence can be adduced from the *Rigveda*.⁸⁹ We must therefore reject Chanda's suggestion about the twofold division of the Vedic Aryans as

⁸⁸ Chanda, pp. 1-78.

⁸⁹ J. R. A. S., 1917, pp. 168-9

unfounded. As regards his attempt to connect the Outlandic peoples with the Alpine Race, I must reserve the discussion of the purely ethnological aspect of it for the last part of the paper. Here I wish only to test whether the theory explains the philological facts for which it is designed. The inhabitants of the Punjab belong to the Midlandic stock of Chanda and yet they speak a language which is Intermediate and not Midlandic. *Rājasthāni* is very closely allied to *Gujarāti*; so much so that Dr. Tessitory proposes to derive Western *Rājasthāni* and *Gujarāti* from a common Prakritic dialect, leaving Eastern *Rājasthāni* to be explained otherwise.⁹⁰ The speakers of *Rājasthāni* are, like the Midlandic Aryans, dolichocephalic, while the speakers of Gujarati must be, according to Chanda's theory, the Alpine Aryans. Further, Lahnda of Western Punjab is officially classed as an Outer language. Its speakers ought, therefore, to have been of the Alpine physical type; yet, as far as we know them, they do not differ from the peoples of Eastern Punjab. Evidently, Chanda's theory does not explain many of the facts it sets out to account for.

From the discussion of the rise of endogamy and its associated problems it will have been amply evident that the treatment of the subject cannot be complete without an investigation of the physical types of India and their origins. In this field a lead has been given by the genius of Risley. It is best to start with a statement of his opinions.

⁹⁰ I. A. vol. XLIII, p. 21.

He distinguishes seven types: I. The Turko-Iranian of Baluchistan and North West Frontier Provinces. I do not wish to discuss it because I think that it essentially lies outside cultural India. II. The Indo-Aryan type of *Kāś'mir*, *Punjab* and *Rajputāna*. It is dolichocephalic with a narrow nose. I leave out other physical characteristics as they are far too vague. III. The Mongoloid type of the Himalayas, Nepal, Assam and Burma. IV. The Dravidian type "extending from Ceylon to the valley of the Ganges and pervading the whole of Madras, Hyderabad, the Central Provinces, most of Central India, and Chutia Nagpur". It was "probably the original type of the population of India". It is dolichocephalic with a "very broad nose". V. The Aryo-Dravidian type of the United Provinces, Bihar, and Ceylon. It is also found in parts of Rajputana. The head-form is long with a tendency to medium", "the nose ranges from medium to broad". VI. The Mongolo-Dravidian type of Lower Bengal and Orissa. "The head is broad; nose medium with a tendency to broad". VII. The Scytho-Dravidian type of Western India. "The head is broad; nose moderately fine". ⁹¹

II. The Indo-Aryan type: The first objection against this is that the term used to denote this type in the scheme proposed by Risley is unsatisfactory. In the case of others the names are compound terms composed of the names for the two physical types from which the particular type

⁹¹ Risley, pp. 33-34.

is supposed to be derived. Thus what is meant by the term Aryo-Dravidian is that the type is considered to be a mixture of the Aryan type and the Dravidian type. But in the case of the Indo-Aryan type no such mixture is meant. The Indo-Aryan type is not to be understood to be a mixture of the Indian and the Aryan; but that it is a pure type. Indo-Aryan means nothing more than the Aryan of India as opposed to the Aryan of Iran. Thus it will be seen that in Risley's scheme the term is rather misleading. Nevertheless, as in my treatment of the subject I wish to avoid all compound terms I shall retain the term Indo-Aryan to denote the Aryan type of India. Instead we cannot use the term Aryan, for in philology it is generally applied to the Iranians as well as the Indians. By Indo-Aryan, then, we mean the physical type to which the Vedic Indians largely contributed. The physical characteristics of this type are solely inferred from those of the present population of the Punjāb. We have no reason to think that after the Aryan immigration into India and before Darius' dominion there was any considerable influx of foreigners. When Darius held sway over a part of the Punjab the country appears to have been already very populous and prosperous.⁹² The physical type of the Punjab is so uniform as to preclude any possibility of mixture. Hence we can reasonably assume that a large bulk of the present inhabitants of the Punjab are the descendants of

⁹² Cam. History of India, pp. 335-7.

the Vedic Aryans. Their number might have swollen by later immigrants whose physical type must have been similar to theirs but whose cultural affinities we may not be able to trace. Secondly, an objection has been levelled at Risley's classification of the Rajputs as Indo-Aryans.⁹³ It has been contended that some of the clan-names of the Rajputs are the same as those of the Gurjara tribe or caste and that the reigning dynasty of Kanauj during the ninth century and after was of the Gurjara stock. Hence it is argued that some of the Rajput clans are of non-Aryan descent.⁹⁴ Even the Minas and the Meos of Rajputana are not physically much differentiated from the Rajputs.⁹⁵ The Rajputs are thus of the same race as the other peoples of Rajputana. We cannot hold that Rajputana was untenanted before the foreign tribes entered it in the sixth century A. C. Perhaps it will be said that the Gurjaras were of the same physical type as the population of Rajputana and hence their presence cannot be detected by physical anthropology, though they had come in large numbers and produced the present population of Rajputana. This supposition is not tenable; for the Gurjaras are believed to be allied in blood to the White Huns,⁹⁶ who seem to have been a brachycephalic people.⁹⁷ It is reasonable, therefore, to assume that a few ruling

⁹³ Risley, p. XX.

⁹⁴ V. A. Smith, "Early History of India" (1914) pp. 411-14.

⁹⁵ Risley, p. 396.

⁹⁶ Smith, *op. cit.* p. 321.

⁹⁷ Keane, pp. 326.

families of the Gurjaras with a small band of followers succeeded in gaining ascendance and imposing their culture over the then population of Rajputana. It is also urged that some of the Rajput-clans "are descended from the so-called aboriginal tribes—Gonds, Bhars, Kols and the like";⁹⁸ apparently because both the Rajputs and the aboriginal tribes have certain clan-names in common. In physical characteristics these tribes are sharply distinguished from the Rajputs; and yet we are asked to believe that they are essentially the same because some items of social organisation are common to both. These and other common clan-names can better be explained as a borrowing by the lowly castes or tribes from the dominant Rajputs. Thus there does not appear to be any serious objection to the Rajputs being classed as Indo-Aryans. Thirdly, there does not seem to be any foundation for Risley's classification of the *Kās'miris* as Indo-Aryans. I have tried to show that the available evidence goes against this supposition. The *Kās'miris* appear to be a mesaticephalic people, perhaps a mixture of the Alpine folk of Central Asia and the Indo-Aryans of the Punjab. Lastly, I have made it clear that Risley was not right in restricting the type to the Punjab and Rajputana. The type includes one or two high castes of Hindustan.

As regards the affinities of the Indo-Aryans outside India, Dr. Haddon will perhaps see in

⁹⁸ Smith, *op. cit.* p. 413.

them modified Proto-Nordics. ⁹⁹ It is better to connect them with the tall variety of the Mediterranean Race.

III. The Mongoloid type: Here I have no comment to make except to draw attention to a mistake of Risley, ¹⁰⁰ repeated in "Man Past and Present". ¹⁰¹ Both the Kanets of Kulu and of Lahoul are there classed as Mongoloid. A glance at the table for the Punjab will show that whereas the Kulu Kanets are very much akin to the Khatri of the Punjab, the Lahoul Kanets are quite distinct from them. The Kanets of Kulu are Indo-Aryans while the Kanets of Lahoul are a mixture of the Kulu Kanets with the Mongoloid folks. Indeed, it was to elucidate the process of racial mixture between the Kanets of Kulu (who show marked points of contact with the Punjabis) and the Mongoloids that Sir T. Holland, our authority on the subject, undertook a study of these two peoples. ¹⁰²

IV. The Dravidian type: Here we come upon the weakest part of Risley's great work. The type is supposed to spread from Ceylon to the Valley of the Ganges, the best representatives of it being Nayars, Paniyans, Santals and others. ¹⁰³ This crudity has been repeated in "Man Past and Present", ¹⁰⁴ where though the jungle tribes like

⁹⁹ op. cit. pp. 26-7.

¹⁰⁰ p. 34.

¹⁰¹ p. 547.

¹⁰² J. R. A. I., (1902) pp. 114+120.

¹⁰³ Risley, pp. 34 & 45.

¹⁰⁴ p. 347.

the Paniyans are classed apart as Pre-Dravidian, the Nayars and the Santals are given as the typical representatives of the Dravidian type. Now even if we leave aside complexion, the Santal stands as far apart from the Nayar as the Paniyan. The nasal index of the Nayar is 76.7; that of the Santal, 88.8; that of the Paniyan, 95.1. The close connection of the Santal with the jungle tribes of Southern India comes out more clearly if we take into account other tribes like the Irula and the Kanikar. It may be broadly stated that the nasal index of the jungle tribes ranges from 80 to 90. We have therefore to connect the Santal with the jungle tribes and separate the Nayar and others like him from them.

I propose to break up this type into four:

(A) The *Pre-Drāviḍa* type. (B) The *Muṇḍa* type.

(C) The *Drāviḍa* type. (D) The Western type.

Before dealing with the types I must make a note about the use of certain terms. The *Malayālam* and the *Tāmil* regions seem to have been collectively referred to by Sanskrit writers as "*Drāviḍa Des'a*" i. e. the *Drāviḍa* country, as opposed to the "*Andhra Des'a*" or the Telugu country. The type I propose to designate *Drāviḍa* is predominant only in the *Malayālam* and the *Tāmil* regions. Hence it should be deservedly called the *Drāviḍa* type. "Dravidian" is only an Anglicised form of the word *Drāviḍa*. But in philology it has been used to denote not only *Tāmil* and *Malayālam* but Canarese, Telugu and kindred languages. It is

also employed to designate a culture different from the Aryan culture. I think it was developed by the interaction between the peoples of the *Drāviḍa* type and those of the Western type. It is convenient to retain this word to denote a culture which in its social organisation was characterised at one end by such practices as the cross-cousin marriage and at the other by dual organisation and matrilineal descent.

(A) The Pre-*Drāviḍa* type: The characteristic representatives of this type inhabit mostly the jungles of Southern India. They are also found in Western India, in the hilly country of Central India, in Rajputana, and the United Provinces, everywhere penetrating like a wedge. Such a distribution makes it probable that these peoples were the first occupants of Southern India. Being pressed by later immigrants they seem to have taken to the hills and jungles, or gone in search of safe resorts in Northern India, or again managed to become low members of the social polity of the immigrants. The immigrants who pressed upon them were the people of the *Drāviḍa* type. Hence the name of the type under consideration. If we regard the Irula, the Kadir, the Kanikar, the Paniyan and the like as the best representatives of this type, its physical characteristics may be thus summed up: The head is long, the cephalic index being generally below 75; the nose broad, the nasal index being always above 80. The Bhil and the Katkari of Western India are members of this racial stock. The Musahar, the

Pasi, the Chamar, and the low castes in general of the United Provinces belong to the same type. From the fact that among the Kanikars of the hills the system of inheritance is from father to son, only a portion of the personal property being given to the nephew, while among those of the plains an equal distribution of one's self-acquired property is made between the sons and the nephews, ¹⁰⁵ it is reasonable to assume that the Pre-*Drāviḍa* people were essentially patrilineal. When they moved north-wards they seem to have imbibed many of the items of the Dravidian culture. They carried with them the practice of raising megalithic tombs and monuments, which are found in the Central Provinces, Eastern Rajputānā and the Mirzapur District of the United Provinces. They spoke Dravidian languages; for some of the names of the villages in the Central Provinces end in a Canarese termination ¹⁰⁶, and some village-names in the districts of Gaya and Mirzapur are distinctly Dravidian. ¹⁰⁷ On the side of social organisation they seem to have carried the practice of cross-cousin marriage, which now exists among them for the most part as survivals. ¹⁰⁸

This type has till now been known as Pre-Dravidian. Some authorities connect these people with the Sakai of the Malay Peninsula and the

¹⁰⁵ Thurston, op. cit. III, p. 169.

¹⁰⁶ Central Provinces District Gazetteers : Chanda, p. 123.

¹⁰⁷ J. A. S. B., 103 pt. III, pp. 92-93.

¹⁰⁸ J. R. A. S. 1907, pp. 626,

Australians. ¹⁰⁹ They might have been the autochthones of India.

(B) The Munda type: Peoples having a very slight tendency towards mesaticephaly and a broad nose (nasal index, above 80) are massed together in Chota Nagpur and Western Bengal. They are also found in Bihar, but not in the United Provinces. ¹¹⁰ In this region Munda culture seems to have originally flourished. ¹¹¹ Hence it is best to designate the type as the Munda type. Some of the peoples belonging to this type speak Indo-Aryan and Dravidian languages. In culture the Munda peoples have affinities with the Indonesian and the Melanesian regions. That this Munda culture had a far wider distribution than at present is certain because "Munda languages must once have been spoken over a wide area in Central India, and probably also in the Ganges Valley". ¹¹² Further some of the names of villages in the districts of Gaya and Mirzapur are Munda in origin. ¹¹³ The Munda languages are closely related to the Mon-Khmer languages spoken by the Sakais and Semangs of the Malay Peninsula and are further connected with the languages of Indonesia, Melanesia, and Polynesia in such a manner as to allow us to group them together under one family. ¹¹⁴ A survival of a

¹⁰ Keane, p. 422.

¹¹⁰ Risley, pp. 399-400.

¹¹¹ Haddon, p. 26.

¹¹² Ling. Survey, IV, p. 9.

¹¹³ J. A. S. B., 1903 pt. III, pp. 92-3.

¹¹⁴ Ling. Survey. IV, p. 14 & f. n. p. 21,

peculiar custom, viz. the marriage of the grandfather with his granddaughter, is confined only to this part of India. The existence of it among the Oraons was first made known by S. C. Roy. A counterpart of it is known from Melanesia.¹¹⁵ Roy has also noticed certain practices from Bihar which are reminiscent of this survival.¹¹⁶ Another sort of survival of this curious custom is reported from Ganjam (?), where even now a Munda language is spoken. Among the Sollokhondia section of the Gaudo caste if a girl fails to secure a husband before puberty she has to go through a nominal marriage with an old man, "preferably the girl's grand-father".¹¹⁷ A similar practice prevails amongst the Kurumo of Ganjam.¹¹⁸ The custom of a marriage between the grand-daughter and the grand-father must have formed part of the Munda culture. A neolithic artifact known as the "shouldered celt" is peculiar to the highlands of Bengal and Assam. Identical tools are found in the Malayan region.¹¹⁹ This limited distribution of the implement in India lends support to the conclusion that the people who used it came into India from the Malayan region rather than vice versa. Further as the tool is not found west of the area characterised by the Munda culture it is reasonable to suppose that the Munda people

115 S. C. Roy. "*The Oraons*" p. 352-4.

116 *ibid.* .

117 Thurston, *op. cit.* II, p. 276.

118 *ibid.* vol. IV, p. 179.

119 Journal of the Dept. of Letts., Calcutta University, I, p. 165.

were responsible for the introduction of this artifact. The conclusion about the origin of the Munda type is that the people of this type came into India from the Malayan region when they were in the Neolithic Age.

The typical representatives of this type are the Munda, the Santal, and also the Musahar and the Chamar of Bihar.

(C) The *Drāviḍa* type: This type is characterised by a long head, the cephalic index being below 75, and by a medium nose, the nasal index being less than 77. It is restricted to the *Tamil* and *Malayalam* countries.¹²⁰ Matrilineal descent seem to be the chief characteristic of the social organisation of the people of this type. A statement of Megasthenes is construed to refer to this peculiarity of the social organisation of Malabar.¹²¹ A physical trait which I have so far not taken into consideration is the hair. It is of special importance in connection with the inquiry of the affinities of this type. Most castes of Malabar excepting the Nambutiri have little or no hair on the cheeks and the chest. They are clean-shaved and the Nambutiri imitating them shaves all his body excepting the top-knot. "Amongst the people of good caste in Malabar, to speak of one as a hairy man is to speak of him reproachfully".¹²² This lack of hair on the cheeks definitely connects the *Drāviḍas* with the Brown Race of

120 Thurston, op. cit. I, p. Xli.

121 W. Logan. "Malabar" I, p. 247.

122 Madras Museum Bulletin vol. III p. 38.

Prof. Elliot Smith.¹²³ When they came from Mesopotamia or Arabia cannot be ascertained. They might have brought with them the matrilineal type of social organisation from these countries; for there is some evidence to think that both the Arabs and the Babylonians practised mother-right.¹²⁴

The best representatives of this type are: the Nāyar, the Tiyan, the Badaga, the Agamudaiyan and the Vellāla. I exclude the Nambutiris from this type because their cephalic index is above 75, and they are extremely hairy. The Todas are a problem. Their cephalic and nasal indices are such as to include them under this type; but their hairy system is particularly well developed. Dr. Rivers connects them with the Malabar castes and attributes their hairiness to their environment.¹²⁵ Against this explanation R. Chanda has justly urged that the Badagas, another tribe of the Nilgiris, do not seem to be hairy.¹²⁶ In view of the fact that "Of all the castes or tribes of Malabar, the Nambutiris perhaps show the greatest number of resemblances to the customs of the Todas",¹²⁷ it is not unlikely that they might have some connection with the Nambutiris.

(D) The Western type I shall deal with in

123 "The Ancient Egyptians", pp. 50-62.

124 H. Schaeffer, "The Social Legislation of the Primitive Semites" p. 3.

125 "The Todas" pp. 708-8.

126 Journal of the Dept. of Letts. Calcutta University, vol. VIII. p. 300.

127 "The Todas" p. 709.

connection with the Scytho-Dravidian type of Risley.

V. The Aryo-Dravidian type: As the discussion so far must have made it clear we cannot speak of any such type. I have shown that the high castes of the United Provinces (and perhaps also of Bihar) must be classed as Indo-Aryan. The Lower castes of the United Provinces must be referred to the Pre-*Drāviḍa* type and those of Bihar to the *Munḍa* type. That we must separate the low castes of Bihar from those of the United Provinces is made clear by the differential index. The differential index between the Brāhmans of the two provinces is 2.05; that between the Kurmis is 3.49; and that between the *Chamār* is 4.01. The intermediate castes of the United Provinces must be considered to be the result of a mixture between the Indo-Aryan and the *Draviḍas*, while those of Bihar that of the Indo-Aryans and the Mundas, with perhaps a Pre-*Drāviḍa* stain.

VI. The Mongolo-Dravidian type: Risley describes the head of this type as broad but, I think, it is better described as medium. Only the Rajbansi Magh of the Chittagong Hills shows a cephalic index over 79; and he is essentially a Mongoloid. I have shown reasons to abandon the conception of Risley's Dravidian type. Nor is it necessary to bring in the Pre-*Drāviḍa* type; for the Munda can explain almost all the peculiar features of this type as seen in Orissa. In Bengal the nasal index, with very few exceptions, is

below 78. ¹²⁸ The nasal index of the Mongoloid type in India is in most cases above this figure. ¹²⁹ Nor does the orbito-nasal index support any idea of a Mongoloid mixture. In the case of the Mongoloid people it is below 110. ¹³⁰ In three lower castes of Bengal,—the Pod, the *Bagdi*, and the *Chāndāl*,—the figures are: 111.5, 112.2, and 114.0. In Orissa the orbito-nasal index varies from 112 to 117. I do not wish to imply that there is no Mongoloid mixture in this part of India, but only to point out that the published data do not give us any clue. The Savaras of Ganjam are distinctly Mongoloid. ¹³¹ Again some of the castes of the United Provinces show marked cultural affinities with the Mongoloid peoples. Among the Bahelias, Dhangars, Dharkars, Dombs, Dusadhs and Nais, marriage is permitted in the line of one's mother's sister. ¹³² Every-where in India such marriages are strictly prohibited; hence the permission for such marriages among these castes is very unusual. We can explain it only as a borrowing from the Mongoloid people, the Bhotias of Sikkim. Among them one can marry one's cousin on the maternal side, either mother's brother's child or mother's sister's child. ¹³³ I think the Bengalis are only an extension of the

128 Risley, p. 401.

129 *ibid.* p. 402.

130 *ibid.* p. 31.

131 Thurston *op. cit.* VI, p. 312.

132 U. P. Census Report. 1911 p. 212.

133 Bengal Census Report 1911 p. 326.

Western type. The differential index shows that the Bengal Brāhman is more nearly related to the *S'envi* and the *Chitpāvan* Brāhmans of Bombay than with the Bihar Brāhman and far more so than with the U. P. Brāhman. There is evidence to show that the people of Bengal have affinities with the Dravidian culture. The use of the Chank-bangles in marriage even by the Brāhmans is an instance in point. ¹³⁴ Risley thinks that there is "a strain of Indo-Aryan blood in the higher groups". ¹³⁵ In view of the fact that the differential index between the Bengal Brāhman and the Chandal is 1.11, while that between him and the U. P. Brahman is 3.89, there does not seem any ground for the supposition. In Orissa there appears to be some mixture of the *Mundā* type because the nasal index is sometimes very high.

VII. The Scytho-Dravidian type: What Risley exactly meant by the term Scythian is not clear. He could not have meant Mongoloid for then there would have been no point in distinguishing this type from the Mongolo-Dravidian. He used the word as equivalent to the S'akas of Sanskrit writers. That there is no evidence of the S'akas having reached so far as this type stretches is amply proved. ¹³⁶ We must, therefore, give up this designation of the type. I propose to call it the Western type because it characterises the

134 J. Hornell, "The Sacred Chank of India" pp. 145-6.

135 *op. cit.* p. 33.

136 Risley, p. XX.

Western coast from Gujarat to South Canara, and thence spreads inwards into Coorg, Mysore and the Southern *Marāthā* country and through Orissa into Bengal. The head is mostly medium with a slight tendency towards broad; the nasal index in most communities is below 78. Typical representatives of the type are: *Sale, Bānt, Vakka-liga, Coorge, S'envi, Prabhu, Nāgar, Chitpāvan, Māla, Mādiga, Holeyā*. We saw above that R. Chanda seeks to connect the Gujarātis, the *Marhāṭhis*, and the Bengalis with a people of the Alpine Race that, he supposed, came from Chinese Turkistan. Though the fact seems to have been overlooked by him he has the support of no less an authority than Dr. Haddon who first postulated an immigration of the Alpine folks to account for the "strongly marked brachy-cephalic element in the population of western India".¹³⁷ Against this route of immigration it must be objected that if the Alpine people came through Kās'mir and the Punjab how is it that we have no trace of either brachycephaly or mesaticephaly in the intervening area till we come to Gujarāt? Further, highest cephalic indices are recorded from the southern part of the region characterised by this type, i. e. from Bellary. The distribution of the type sketched above suggests quite a different route of immigration,—on the western coast by sea. Most of the castes are mesaticephalic and nine of the castes of the *Marhāṭhi* region, pooled together (see pl. 2) give 77.84 as the mean

¹³⁷ op. cit. p. 27 and map 1.

cephalic index. It is therefore more reasonable to seek the origin of this type in a mixed stock rather than in a purely Alpine one, for the latter has a very broad head, the cephalic index being often 85 and upwards. ¹³⁸ Western Asia seems to provide us with such a people; for there we have a prolonged process of mixture between the Brown Race and the Alpine Race. ¹³⁹ Dr. Schoff sees in Cutch and Kachh reminiscences of the Kassites who migrated from Elam about 2200 B. C. ¹⁴⁰ H. J. E. Peake thinks that about 2000 B. C. some of the Nordics had made their appearance in Asia Minor. ¹⁴¹ If some of them accompanied the people who landed on the western coast of India, we can explain the colour of the eyes of the *Chitpavan* of Bombay. It is greenish grey, rather than blue. Their eyes are in *Marhāthi* as "cat-eyes" ¹⁴² Giuffrida-Ruggeri has suggested the following classification of the ethnic elements in India: (a) Negritos. Apparently there are no representatives of these. He thinks that they survive in tribes like the Bhils, the Gonds etc. ¹⁴³ I do not see any reason to distinguish these from the next class. (b) Pre-Dravidians (Australoid-Veddaic) (c) Dravidians. They are connected with the Ethiopians, with

¹³⁸ Keane, p. 438.

¹³⁹ Elliot Smith, op. cit. p. 136.

¹⁴⁰ "The Periplus of the Erythrean Sea" p. 134.

¹⁴¹ J. R. A. I., 1916, p. 172 and Map 2.

¹⁴² Bombay Gazetteer Vol. X p. 111 f. n. (3).

¹⁴³ Journal of the Dept. of Letts. Calcutta University. V, p. 226.

the exception of the Somalis and Gallas. ¹⁴⁴ Under this he includes the mesaticephalic and the brachycephalic peoples of the Canarese-Telugu region. ¹⁴⁵ Being afraid of sea migration—witness his jibe at Elloit Smith, ¹⁴⁶—he brings the Dravidians into India from Iran; and explains the “elevation of the cephalic index among the inhabitants of the south by a mixture with the brachycephalic Negritos “the most ancient population between India and the Persian Gulf”. ¹⁴⁷ He entirely misses the significance of the distribution of the dolichocephalic and the mesaticephalic types explained above. (d) Tall dolichocephalic elements, ¹⁴⁸ (Toda). (e) Dolichocephalic Aryans. Under this class he includes Kafirs, Dards, Rajputs, and the Kanet of Lahoul. ¹⁴⁹ (f) Brachycephalic Leucoderms. He accepts the hypothesis of Chanda, ¹⁵⁰ about immigration of the Alpine folks. I do not think it necessary to make any more comments on this sort of classification.

144 *ibid.* p. 219.

145 *ibid.* p. 222.

146 *ibid.* p. 233.

147 *ibid.* p. 216.

148 *ibid.* p. 220.

149 *ibid.* p. 256.

150 *ibid.* p. 216.

ABBREVIATIONS :

- Chanda R. : "The Indo-Aryan Races (1916)
 Haddon A. C. : The Wanderings of Peoples (1919).
 I. A. : Indian Antiquary.
 J. A. S. B : Journal of the Asiatic Society of
 Bengal.
 J. R. A. I. : Journal of the Royal Anthropological
 Institute.
 J. R. A. S. : Journal of the Royal Asiatic Society.
 Keane A. H. : Man Past and Present (1920)
 Ripley W. Z. : The Races of Europe (1899).
 Risley H. H. : The People of India (1915)
 Thurston E. : Tribes and Castes of Madras.
 Vedic Index : By Profs. A. A. Macdonell and A. B.
 Keith (1912).

Punjab.

Name of Caste.	Cephalic Index.		Nasal Index.		Cephalic L.	
	M.	St. Dev.	M.	St. Dev.	M.	St. Dev.
Arora (27)	72.79	3.8	71.60	5.05		
Awan (33)	74.45	2.73	69.21	5.85		
Biloch (60)	80.21	4.68	69.81	5.70		
Chuhra (80)	73.49	2.69	75.29	6.04	186.74	6.15
Gujar (13)	72.30	2.66	67.37	4.87		
Kanet: Kulu (60)	74.11	2.57	74	5.98		
Kanet: Lahoul						
(30)	77.48	2.37	66.45	5.53		
Khatri (60)	74.15	3.02	73.30	6.89	185.72	6.05
Machhi (19)	72.50	1.82	70.29	5.22		
Pathan (80)	76.55	3.50	68.70	5.13		
Sikh (80)	72.76	2.92	69.10	6.06		

M.=Mean ; St. Dev.=Standard Deviation.

Punjab (ctd.)

Castes in the previous order.

Caste.	Cephalic B.		Nasal L.		Nasal B.		Nasomalar Index*	
Arora							116.19	3.18
Awan							116.06	3.98
Biloch							118.15	4.39
Chuhra	137.16	4.75	48.06	2.21	36.11	2.45	115.29	3.13
Gujar							115.68	3.64
Kanet: Kulu							116.01	4.93
Kanet: Lahoul							113.35	4.45
Khatri	137.50	5.24	48.82	2.76	35.70	2.81	114.88	3.36
Machhi							116.55	3.89
Pathan							117.37	4.28
Sikh							116.58	2.95

* This appears to be same as the Orbito-nasal index.

United Provinces of Agra and Oudh.

Caste.	Cephalic Index		Nasal Index		Cephalic Length	
Bania (80)	72.02	3.36	80.55	9.28		
Babhan (26)	73.52	2.25	73.60	7.24		
Bhar (100)	73.66	3.06	81.97	8.59		
Brahmin (100)	73.29	3.12	74.88	8.02	187.56	5.58
Chamar (100)	72.90	2.92	86.52	7.64	185.18	5.79
Chhatri (100)	73.12	3.12	78.36	7.70	188.35	6.51
Dom (100)	74.28	3.54	83.60	8.86	183.91	6.63
Kayasth (100)	72.48	2.99	78.87	8.22	186.62	5.75
Khatri (15)	71.98	2.71	79.15	9.29		
Kol (32)	72.51	2.96	82.39	7.42		
Kurmi (100)	73.25	3.23	79.46	8.38	184.05	6.21
Lohar (45)	72.93	3.34	83.45	11.43		
Musahar (18)	74.29	2.94	86.17	7.84		
Pasi (100)	72.68	3.21	85.92	9.11	185.10	6.89
Tharu (65)	74.11	3.06	80.30	9.12		

U. P. (ctd.)

Caste	Cephalic Breadth		Nasal Length		Nasal Breadth.	
Brahmin	137.42	4.60	46.57	3.04	34.72	2.70
Chamar	134.98	4.21	41.02	2.75	35.19	2.20
Chhatri	137.68	4.60	45.80	3.76	35.65	2.52
Dom	136.40	4.49	45.44	3.47	37.72	2.65
Kayasth	135.42	4.91	44.66	3.19	34.99	2.54
Kurmi	135.13	4.12	44.02	2.95	34.84	2.56
Pasi	134.48	3.87	41.26	3.21	35.23	2.28

Bihar.

	Cephalic Index		Nasal Index		Cephalic Length	
Babhan (59)	76.98	3.66	73.55	7.02		
Bind (13)	73.68	3.64	82.76	7.68		
Brahmin (67)	74.91	3.02	73.24	6.35	187.88	6.27
Dom : Maghaya						
(100)	76.21	3.25	82.58	6.98	186.37	6.29
Chamar (62)	76.26	4.35	82.93	7.20	184.42	7.28
Kurmi (71)	75.82	3.50	79.04	6.96	186.97	6.67
Musahar (77)	75.79	2.91	89.20	8.86	183.17	5.91

Caste	Cephalic Breadth		Nasal Length		Nasal Breadth.	
Brahmin	140.81	4.74	49.33	3.53	36.11	2.54
Chamar	140.35	5.28	46.08	2.90	38.13	2.52
Dom: Maghaya	142.20	4.26	48.04	3.09	39.62	2.42
Kurmi	141.55	4.54	47.66	3.46	37.45	2.42
Musahar	138.69	4.18	45.52	3.01	40.40	2.97

Bengal.

	Cephalic Index		Nasal Index		Cephalic Length	
Brahmin (100)	78.89	3.63	70.89	6.85	181.76	5.82
Chandal (67)	78.11	4.04	74.27	6.83	183.31	6.94
Kayastha (100)	78.30	3.82	70.78	6.34	182.47	6.08
Koibarta (100)	77.57	3.85	76.68	6.70		
Muchi (27)	77.22	3.55	75.30	6.92	182.93	6.76
Rajbansi (100)	75.36	3.21	76.86	5.81	186.28	6.85
Sadgop (48)	77.95	3.23	74.24	7.46		

Bengal (ctd.)

Caste	Cephalic Breadth		Nasal Length		Nasal Breadth.	
Brahmin	143.25	4.54	49.71	4.09	35.09	2.72
Chandal	143.18	4.52	49.69	2.69	36.79	2.88
Kayastha	142.88	4.95	50.19	3.09	35.39	2.52
Muchi	142	4.45	49.19	2.94	36.89	2.66
Rajbansi	140.26	5.15	48.96	2.85	37.57	2.52

Bombay.

Caste	Cephalic Index		Nasal Index		Cephalic Length	
Bhil : Khandesh						
(103)	72.56	3.04	95.80	11.84	182.92	6.11
Chitpavan Brah-						
min (100)	77.41	3.95	76.99	6.60	186.43	7.37
Desasth Brahmin						
(100)	77.09	4.37	79.73	6.14	185.5	6.39
Katkari (109)	74.37	2.65	88.46	8.05	178.86	6.20
Kunbi (100)	77.52	4.36	79.44	5.70	180.10	6.35
Mahar (100)	77.17	3.55	82.23	6.20	181.40	5.83
High Caste						
Maratha (100)	76.34	4.11	71.47	6.35	184.62	6.39
Maratha Ghati						
(100)	78.33	4.53	80.32	7.47		
Nagar Brahmin.						
(100)	79.93	4.33	73.58	7.66	184.51	7.47
Prabhu (100)	80.00	3.80	76.18	7.13		
Senvi Brahmin						
(100)	79.08	4.06	75.15	7.46	186.22	7.18
Sonkoli (100)	77.62	3.24	76.77	6.96	185.00	5.83
Vani : Gujarat						
(139)	78.52	3.46	76.30	8.09		

Bombay (ctd.)

Caste	Cephalic Breadth		Nasal Length		Nasal Breadth	
Bhil:Khandesh	132.61	4.43	41.12	3.49	39.05	3.14
Chitpavan	144.25	5.16	49.34	3.26	37.87	2.15
Desasth	142.94	5.41	48.93	2.91	38.81	2.25
Katkari	133.04	3.95	44.04	2.94	38.78	2.49
Kunbi	139.49	5.55	47.81	2.62	37.95	2.09
Mahar	140.12	5.15	47.21	2.58	38.73	2.37
High Caste						
Marhatha	140.92	6.52	52.02	3.37	37.01	2.44
Nagar Brahman	147.16	5.97	50.76	3.56	37.18	2.57
Senvi Brahman	147.15	5.29	50.27	3.63	37.62	2.36
Sonkoli	143.45	4.71	49.62	3.15	37.98	2.62

	Orbito-nasal Index.		Facial Index *	
Bhil	122.06	4.70	123.20	7.22
Chitpavan	115.69	3.84	122.22	7.73
Desasth	116.39	3.83	120.44	6.41
Katkari	112.32	2.78	119.04	7.21
Kunbi	114.42	3.74	120.76	7.48
Mahar	114.55	3.63	122.52	7.56
High Caste Marhatha	124.85	6.91	121.16	8.34
Ghati	115.75	3.84	123.57	6.40
Nagar Brahman	116.73	3.17	121.69	9.07
Prabhu	113.48	3.31	118.41	7.56
Senvi Brahman	114.70	4.17	119.21	7.56
Sonkoli	113.09	3.42	120.40	8.03
Vani	116.60	3.47	120.41	8.38

* This index is thus given in the records used by me. Symmetrically with the cephalic index and the nasal index, this way of calculating the facial index gives us breadth in terms of length. In the usual calculation of the facial index we are given length in terms of breadth.

Madras.

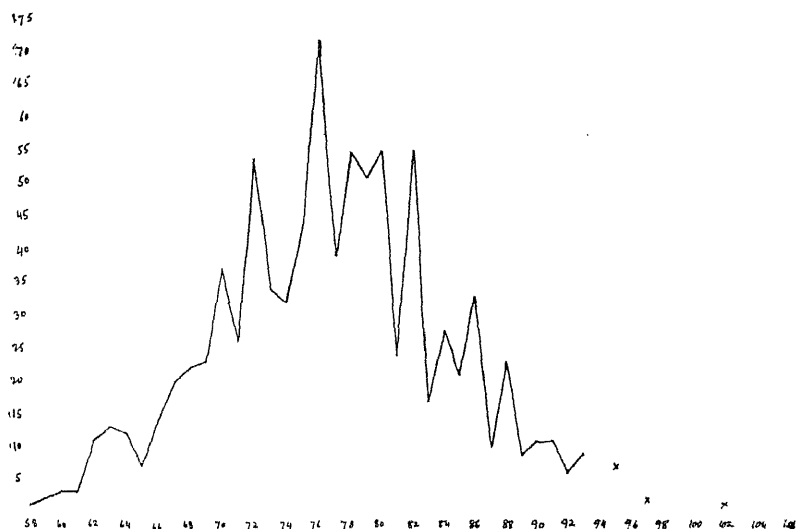
Caste	Language.	Cephalic Index		Nasal Index.	
Kapu (49)	Telugu	78·08	3·70		
Smarta Brahman					
(60)	Canarese	78·45	4·41		
Coorg. (32)	Kodagu	79·72	3·79	72·12	5·22
Billava (50)	Tulu	80·36	4·40		
Sivalli Brahman					
(40)	do.	80·44	5·21		
Vakkaliga (50)	Canarese	81·76	5·03		
Toda (76)	Toda	73·36	2·22		
Yeruva (25)	Canarese	73·48	3·06	89·76	5·26
Vellat (40)	Tamil	73·92	2·74		
Nayar (39)	Malayalam	74·44	2·85		
Pattar Brahman					
(25)	Tamil	74·44	3·31		
Tamil Brahman					
(40)	do.	76·55	3·44		
Nasomalar Index.					
Coorg	120·03	5·38	Yeruva	115·00	4·51

Differential Index.

(based on six characters: cephalic index, cephalic length, cephalic breadth, nasal index, nasal length, and nasal breadth.)

PUNJAB.		Desastha Br. and S'envi	
Chuhra and Khatri	·88	Br.	2·10
UNITED PROVINCES.		" " & Nagar	
Brahman and Chhatri	·89	Br.	2·59
" " Kayasth	1·47	" " & High	
" " Kurmi	1·83	Caste Maratha	2·64
" " Dom	2·56	GENERAL.	
" " Pasi	3·17	U. P. Kurmi & Bihar Kurmi	3·49
" " Chamar	3·32	" Chamar & Bihar	
Pasi and "	·27	" Chamar	4·01
Kurmi and "	1·71	<hr/>	
BIHAR.		U. P. Brahman & Punjab	
Brahman and Kurmi	1·75	Chuhra	1·02
" " Chamar	2·42	" " " Punjab	
" " Dom	2·95	Khatri	1·38
Chamar and Kurmi	1·45	" " " Bihar Br.	2·05
BENGAL.		" " " Chitpavan	
Brahman and Kayastha	·43	Br.	3·66
" " Chandai	1·11	" " " Desastha	
BOMBAY.		Br.	3·94
<hr/>		<hr/>	
Desastha Brahman & Sorkoli	·95	Bengal Br. & Senvi Br.	2·30
" " " Chitpavan		" " " Chitpavan Br.	2·44
Brahman	1·02	" " " Behar Br.	2·52
" " & Mahar	1·61	" " " Desastha Br.	2·96
" " " Kunbi	1·73	" " " U. P. Bra.	3·89

Bombay (Nasal Index) 9 castes* posted :



Pl. 1.

(1) Desastha Brahmin.

(6) Ghâti

(2) Chitpavan Br.

(7) Kunbi

(3) S'envi „

(8) Sonkôli

(4) Prabhu

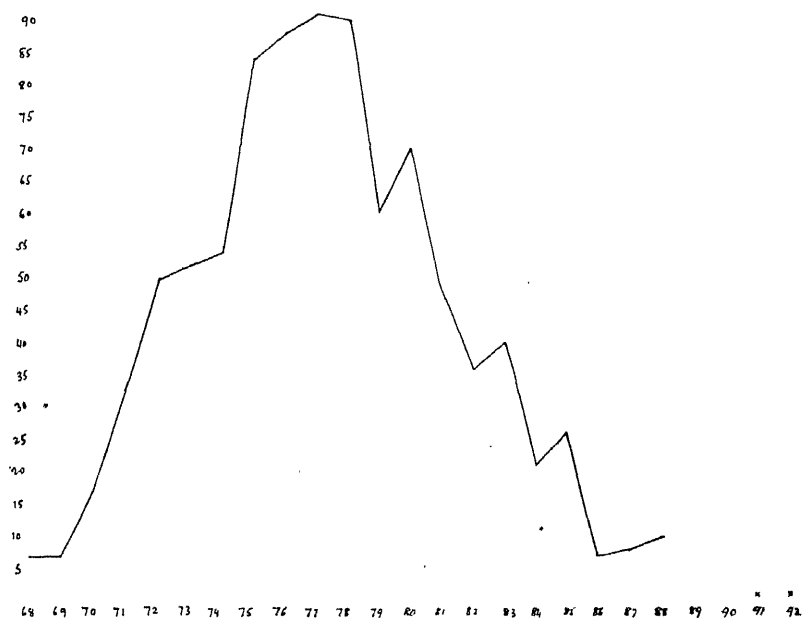
(9) Mahâr

(5) High Caste Marâthâ

M = 77.58.

St. Dev. = 7.36.

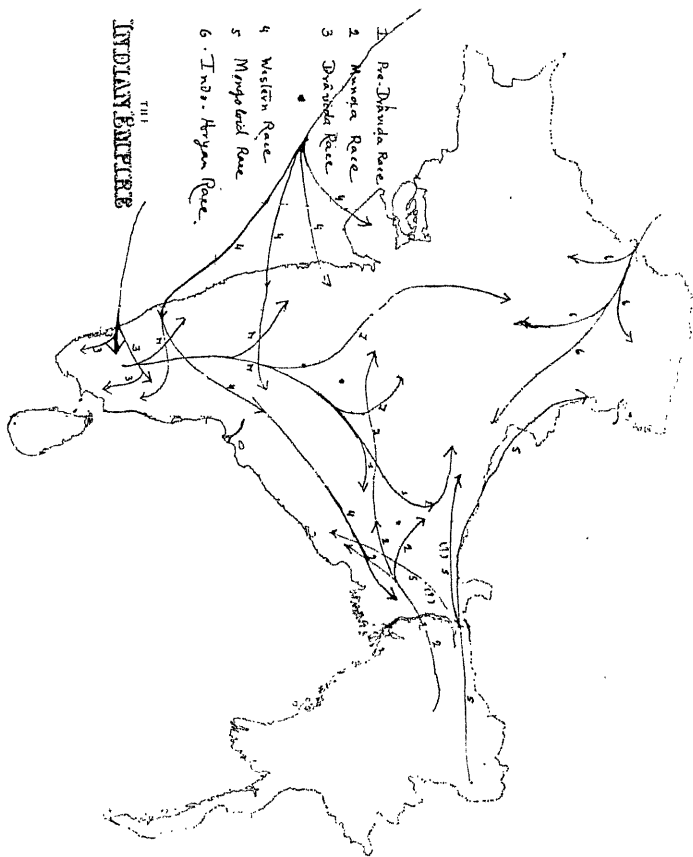
Bombay (Cephalic Index) 9 castes posted :



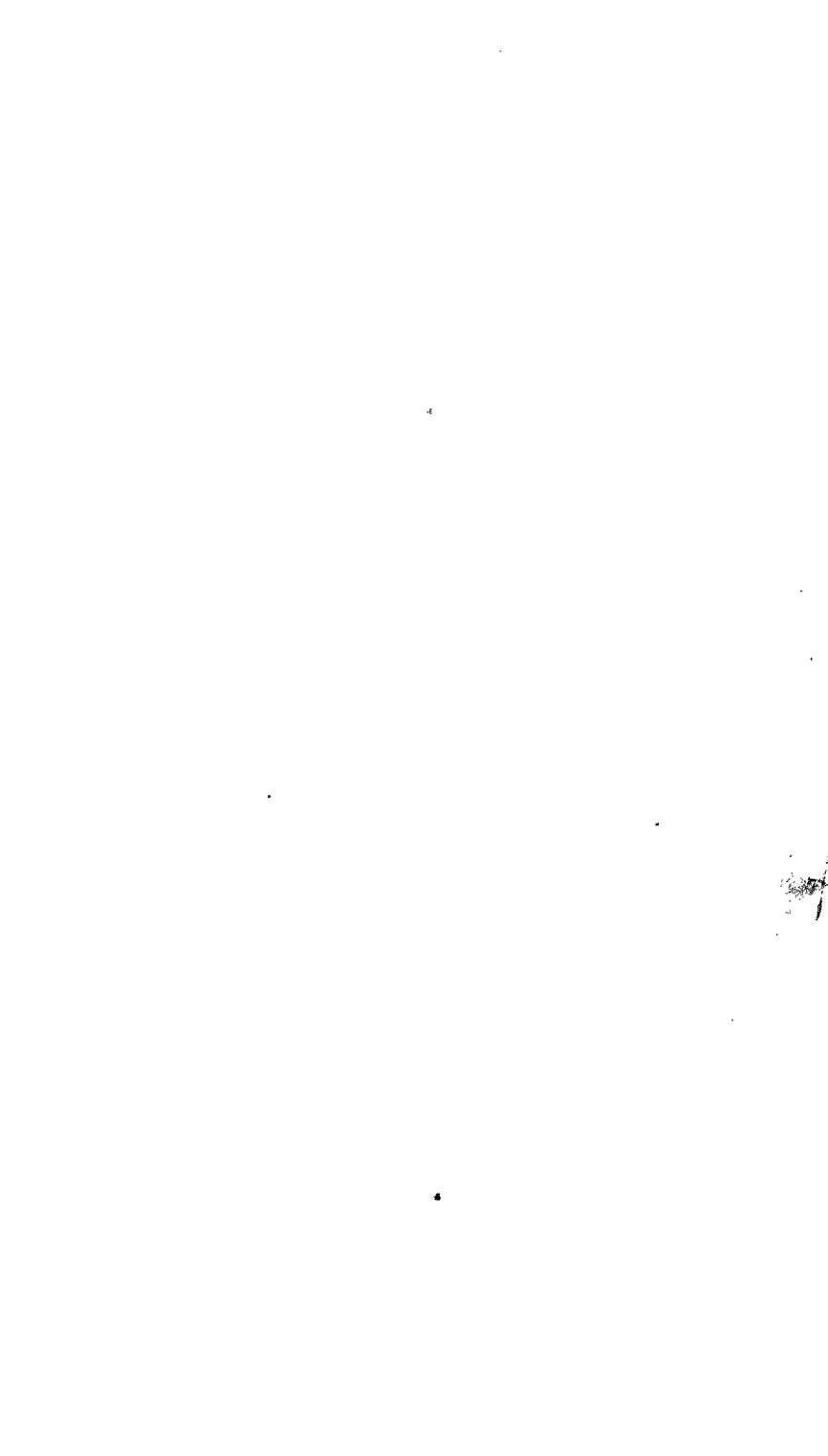
Pl. 2.

M. = 78.84.

St. Dev. = 4.17.



THE
 INDIAN RACES



MISCELLANEOUS CONTRIBUTIONS.

I. BAIGA.

Baiga is an aboriginal tribe living in the Satpura mountains falling within the Central Provinces. They number about 30,000, but with their off-shoots which have crystallised into distinct tribes, their strength within that province is over a lakh. Their biggest branch is that of Binjhvars, who number not less than 60,000. In the *Marhatta* country these Binjhvars are known as Inghvars, whose strength is close upon 10,000. Another branch spread over Chhattisgarh or the eastern portion of the Central Provinces and known as Bhaina, owns 17,000 souls. The honorific title of a Baiga is Bhumia, an Aryan word meaning lord or child of the soil. The Baiga is regarded as the earliest inhabitant and worship is paid to local gods through him. The title of Bhumia is therefore regarded as very appropriate, and as Bhuiya is a variant of that term it is held by some ethnologists that Baigas are connected with the great Bhuiya tribe, who in Bengal and Bihar count over a million.

None of these tribes has retained its original language. They speak Hindi, Oriya or Bengali according to the locality they live in. The tribal names they now bear are all derived from Aryan sources, except one, viz, Baiga which appears to be an aboriginal name, the signification of which is unknown.

The Bhuiyas living as they do in the tract where Kolarians abound have been shown as belonging to the Kolarian *Mūṇḍā* stock. The Baigas have therefore been relegated to the same stock.

The settlement of this question is a very difficult one. The stock has been determined from the environment, but there is such a jumble of Kolarian and Dravidian stocks in Chota Nagpur, where Bhuiyas abound, that habitat is no true guide for this purpose. The well-known Dravidian tribe of Oraons lives so mixed up with the *Mūṇḍā* and Kols that he would be a bold man who would declare a tribe as belonging to one stock or the other on the strength of the locality where they are found. Anthropometry extinguishes the social difference in such places, and that was why Sir Herbert Risley recognised only one race, the Dravidian and no Kolarian. He, however, could not deny the linguistic distinction, which remains perhaps the best test for determining the difference between people of the two waves of immigration, driven to take refuge in hills and mountains by the irresistible rush of Aryans later on. But the Baigas have lost their language and leave us stranded in the sands. The situation is, however, not altogether hopeless, in view of the fact that in the Baigani patois there still exist a number of words, which cannot be traced to any Sanskrit origin, leading to the inference that they may be remnants of the original language which the Baigas spoke in the immemorial past. It is thus within the range of possibility to connect them

with one of the numerous aboriginal languages dealt with in Sir George Grierson's Linguistic Survey of India. The very word 'Baiga' suggests to me a connection with the Badagas of the south. The Baigas have a tradition that their ancestors entered India from the north, and a southern scholar, who is corroborated by Thurston, informs me that "*Badaga*" means a northerner. Phonetic rules recognise the softening of a *ḍ* into *i*, whereby *Badaga* could easily get transformed into Baiga. I know this is a wild leap into an abyss, but with the obliteration of all landmarks, one cannot do without a bold stride. I have ventured to hazard the conjecture in the hope that some southern scholar well-versed with the *Badaga* language, which is treated as a dialect of Kanarese by Sir George Grierson would take up the matter and establish or dis-establish the plausible connection with these two tribes. If the Oraon of the Central Provinces can be linked with the Brahui of Baluchistan, I see no reason why the Baiga of that locality could not be connected with the *Badagas* of the Madras Presidency.

In view of the fact that the characteristics and traditions of *Badagas* and Baigas have been fairly well recorded in ethnographic works, I have not endeavoured to mention them here in support of the conjecture thrown out. From Thurston's account it would appear that a great change has taken place, so that the Madras *Badagas* have become the best cultivators, contrary to the Baigas of the Central Provinces, where

the latter are ever prone to follow the primitive method of burning forests and strewing seeds in the ashes, without ploughing the land at all.

Many of the *Badagas* have become Lingayats and Thurston shows that they are not a "wild tribe", but Mr. A. H. Keane classifies them as pre-Dravidians, having no culture and often betraying marked Negroid characters, as if they were originally Negroes or Negritos, later assimilated in some respects to their Dravidian conquerors.

With such conflicting data, it would be worth while for a Kanarese scholar to examine the vocabulary of the Baigas who still retain certain peculiar words, whose origin cannot be traced to the language (Hindi) they speak, and which they appear to have retained from the stock of the tongue they originally spoke. It is with the object of drawing attention to this point, that I have ventured to bring the matter to the notice of ethnologists in the hope that some clue to the true affinity of the Baiga tribe may be traced up. *

HIRA LAL, B. A.
(*Rai Bahadur*).
Nagpur.

* This paper was read at the eleventh session of the Indian Science Congress at Bangalore, 1924.

H. MARRIAGE CUSTOMS AMONG THE MUDUVANS OF TRAVANCORE.

The Muduvans of Travancore are an interesting hill-tribe found on the Cardamom Hills bordering the district of Madura and in the Neriya-mangalam Valley of North Travancore. Living as they have been in the backwaters of civilisation, they have preserved some of their old customs, which may be of interest to the anthropologist. I propose to deal here with their marriage customs.

Marriage generally takes place after puberty. Sexual licence before marriage is neither recognised nor tolerated. All the unmarried young men live together at night in a 'Bachelor's Hut' away from the married quarters. The young unmarried women live likewise separately in the company of old women. Soon after supper both young unmarried men and women go to their respective huts. This custom finds its counterpart among the Nagas of Assam and the Orāons of Chota Nāgpur.

As among the Veddas of Ceylon, marriage takes place between cross-cousins i. e. between the children of brother and sister, never between those of two brothers or two sisters. The union of such people will be considered incestuous. The practice of marrying a maternal uncle's daughter is an old custom. It was said to be universal among the Dravidians at one time, and is considered to be a survival of the mother-kin stage.

Marriage is often arranged by friends or more

often by the cousins on the mother's side of the bridegroom, who request the hand of a girl or woman from her parents.

Should they agree, the consent of even the most remote relations is obtained, and if everyone is agreeable, an auspicious day is fixed, when the parents of the bridegroom go to the village with their relations. The marriage ceremonial takes place in the evening after 6 p. m. and is very simple in form. The bridegroom elect goes with his best men, generally his brothers and his sisters to the bride's hut, when her parents are absent at the *Chavadi* (common meeting place), as they cannot be spectators of the ceremonial. He then presents her with ear-rings, brass bangles, cloth, and a comb made of bamboo or reeds. The presentation of comb forms the essential part of the ceremony and the comb is worn on the head. It is made by the bridegroom himself.

The bridegroom's party then retire to a hut which is specially erected for the purpose. There they spend three days. Being very coy by nature, the bestman as well as the younger brothers and sisters and other female relatives of the bride are meanwhile engaged in bringing the married couple on more familiar terms. The elder brother or sister of the bride is prohibited from visiting the hut. No one stays in the hut during night to keep company. The assembled guests are treated to a feast on the first day. On the fourth day, the party march to the bridegroom's village. The bride is accompanied by her younger brother and

sister. There also a feast is provided for the assembled guests, and the married couple pass the night in a separate hut, usually erected on such occasions. The marriage may now be said to have reached its consummation. The bride's parents and others go back to their village the next day. In the original selection, the woman has no choice, but the man has.

Something like "marriage by capture" is also in vogue among the Muthuvans. When it so happens that a woman's parents do not favour her marriage to a man who seeks her hand, the latter avails himself of a suitable opportunity and forcibly takes the maiden away from her mother's house, when she goes out for water or firewood, and lives with her separately for a few days in a secluded part of the forest.. Meanwhile they are searched for, and finally brought back to the village. The man is tried by the Panchayat and is let off with a light fine of Rupee one or sometimes more. The marriage is then allowed to take place with the consent of the parties.

Remarriage of widows is permitted, but not with any of the brothers of the deceased. In practice, she marries any one but the brothers of her deceased husband. The same ceremonies are gone through, the ear-rings, bangles etc., which she discarded on the death of her former husband, being replaced.

A man may divorce his wife at will, but divorce is seldom resorted to except in cases of infidelity.

A woman has not the same privilege,
Divorce. but she can, when she chooses,
make her husband so unhappy that

he gladly allows her to leave him. A woman who is divorced may remarry again.

The Muduvans present "an example of happiness without culture" and shew signs of progressiveness with the march of civilisation. *

L. A. KRISHNA IYER, B. A.

III. JACKAL'S WEDDING AROUND DELHI.

The March-June (1924) number of "*Man in India*" included a most interesting note on the Fox's wedding. Around Delhi, this is the Jackal's. I think a certain amount of light is thrown on the subject by the narrative in Judges XV. Here we read how Samson, when he desired to return to the wife who had betrayed his riddle, and found her married to another man, caught three hundred foxes, tied torches to their tails and let them loose in the Philistines' corn fields. This links up with the Saturnalia (see Ovid, *Fasti* IV. 679 ff.) and the Arab practice quoted by Mr. Mitra. Moreover, though the solar element in the Samson stories has no doubt been exaggerated, yet Sir James Frazer is surely wrong in saying that the place-names render the theory of a solar myth untenable. His name, and his losing and regaining his hair, indicate strongly that there is a sun-god mixed up with the jester-hero. This

* This paper was read at the eleventh session of the Indian Science Congress at Bangalore, 1924.

impression will be strengthened if we compare the Babylonian hero Gilgames.

On the shores of the Mediterranean, corn suffers from a red-coloured blight with burning properties. To avert this, red puppies were sacrificed outside the Porta Catularia at Rome. It seems possible that the rite at the Saturnalia was a piece of Sympathetic Magic with the same purpose. But "rust" is commonly attributed to the action of the sun, and Samson appears to be the Sun-god burning up the corn of the Philistines with this "rust". That the Roman practice is derived from the Semitic Field is rendered probable by the fact that the rite was performed in April, when in Syria the corn is in most danger from "rust", but some time before the plague is likely to occur in Italy.

A full treatment of the subject will be found in Dr. C. F. Burney's "The book of Judges", pp. 394-396.

WALTER D. FITCH, B. A

ANTHROPOLOGICAL NOTES AND NEWS.

At the third Session of the All-India Oriental Conference held at Madras on the 22nd, 23rd, and 24th of December, 1924, about a dozen papers on ethnological subjects were read, summaries of which are appended below.

Prophylactic Disguise for averting Evil:—By SHAMS-UL-ULAMA JIVANJI JAMSHEDJI MODI, B. A., PH. D., C. I. E., *Bombay*.

As said by Mr. Balfour, in his annual address delivered from the Presidential chair of the Folklore Society of London in February 1924, "among the numerous and varied prophylactic expedients resorted to by man in his endeavour to avert the incidence of that wide-spread terror, 'the evil or envious eye' and other dangerous influences, is that of assuming disguise. The disguise may aim at suggesting an 'alias' to conceal the real identity of the person; but more frequently, the purpose is to make the potential victim appear to be unworthy of the attention of the malign powers". These disguises are prevalent in various parts of Europe, Asia, Africa and America. The object of this paper is to submit a few cases of such prophylactic disguises in Bombay. As said by Mr. Balfour, the disguises are of two kinds:

1. Nominal disguise, which consists of a change of names.
- II. Depreciatory disguise.
 - (i) The first kind can be divided into—
 - (a) Naming children after wild beasts.

- (b) Giving opprobrious names. This class can again be sub-divided into—
 - (1) Giving names of girls to boys, girls being considered as having lesser value.
 - (2) Giving names, signifying that the holders are persons of less value.
- (ii) Depreciatory disguises can be sub-divided into—
 - (a) Smearing the face of a child to make it less attractive.
 - (b) Dressing it shabbily.
 - (c) Sex-disguise. This is of several kinds.
 - (1) Proclaiming the birth of a boy as that of a girl.
 - (2) Perforating the nose or the ear of a boy like a girl.
 - (3) Allowing the growth of long hair in a boy so as to make him appear like a girl.

(a) As an illustration of the nominal disguise, one may point to the Indian practice of a lady having one name at her own parents and another name after marriage at her husband's parents. Again at times, a new-born child is not named for days together or for more than a month, so that no magic can be exercised through the name.

(b) As an illustration of an opprobrious name, we find that at times when one's children die in childhood, the parents name the next child Fakir or Fakirjee, *i. e.*, an ascetic, a mendicant.

II. The case of depreciatory disguise is illustrated by our Indian practice of mothers putting

on black spots on the temples of their children, especially when they are handsome or attractive.

As instance of sex-disguise, we know of (a) cases when the birth of a male child is announced at first as that of a girl; (b) of cases, wherein the ears of boys are perforated like those of girls; (c) and of allowing the hair of boys to grow long without being cut, and then cut after being taken to a sacred place of worship.

The Hill Pandarams of Travancore:—By MR. L. A. KRISHNA AYYER, B. A., *Trivandrum*.

The Hill *Pandarams* are a hill-tribe found in the Koni and Achencoil reserved forests of Central Travancore. Preferring those uninhabited parts abounding in games, they retired before the march of civilisation, and are now found in localities, where absence of competition gives them greater freedom and more room for their nomadic life. In his "Races of Man", Doctor Haddon refers to some of the pre-Dravidian tribes of South India as jungle hunters in a state of savagery with very little, if any, agriculture. The Hill Pandarams afford a striking example of a tribe who subsist by hunting and collecting forest produce. Like the Veddas of Ceylon, they are probably one of the least modified survivals of the ancient pre-Dravidian race. This paper deals with their marriage customs.

Marriage Customs.—In common with other hill-tribes of Travancore, childhood is of short duration, as a girl is being prepared for the most important

occurrence of life, matrimony. Girls reach maturity by 12, and marriage takes place both before and after puberty. A man marries the daughter of his maternal uncle. Unlike the Muduvans, he is at liberty to marry his paternal aunt's daughter. Prohibition extends to marriage of daughter of one's mother's sisters or father's brothers.

Child Betrothals.—Girls are betrothed very early in life by their parents. Generally a girl of 7 or 8 years of age is married prospectively to a man of 18 or 20, who looks on her as his wife. I was informed of an instance of a girl betrothed when she was one year old.

Marriage is arranged for, by the boy's father, who moots the marriage question for his niece to his brother-in-law. Should the match be agreed upon, marriage takes place in the bride's house and lasts for a day. The guests are treated to a feast in the evening, for which all the village folk are invited. After feasting comes the ceremony proper, when the bridegroom and bride are seated before the audience. Presents of new cloth are made to the bride, and the bridegroom ties a necklace of beads round the neck of the bride, when his sisters are present. The bridegroom's father then blesses them: "May your union be happy". The married couple enjoy the night in a hut, specially erected for the occasion, and live separately from the morrow.

This, in short, is an account of the marriage customs of a people, who are in the down-grade

of civilisation. They are truly monogamous. Being nomadic hunters and collectors of jungle produce, on which they subsist, they live in rock-shelters or simple huts, and leave them in favour of another, when the resources are exhausted. They are fast disappearing. They obtain food so abundantly with little labour that they do not suffer from want, that great spur to human progress. Consequently they despise manual labour, and a growing inertia is the inevitable result. Lastly, their life of isolation develops in them a narrowness of view and conservatism of custom, which prevent them even from associating themselves with neighbouring tribes. They number about 50 and it may not be long when they may become totally extinct.

Agharni-Simantonnayana—The first Pregnancy:—BY MR. S. S. MEHTA, *Bombay*.

In all countries and all times among semi-civilized and highly-civilized nations, some special importance is attached to the first pregnancy. The Hindu performs some ceremonies on the termination of two months, four months and six months, *i. e.*, during the odd months. The *garbhādhāna*, the sowing of the fruit-bearing semen in the womb and such other subsequent rites as have been enjoined by Manu and the succeeding legislators upon the pious householder, who continue ever since the time of the first legislator up to the present moment, only with very slight modifications to perform the same round of ceremonies need not detain us at all. We are concerned with the rites performed for the main

purpose, as it were, of declaring to the community that a certain newly-wedded wife in the homestead of a certain householder is in the family way. This practice which has been consecrated into a custom prevails in many castes in India and the present paper is confined to the exposition of the subject in due details as it can be fairly dealt with as a necessary performance among Nāgar Brāhmans of Gujarat, where it was celebrated in its full glory and is now not so splendidly done in certain places.

It is known as Agharni celebration in which a silken golden armlet is tied with due ceremony, and that forms the essential feature. The father of the girl generally celebrates the occasion by giving presents in the form of cloths and ornaments to his son-in-law and his parents as well as relations one or two degrees remote. The present paper is not concerned with citing all the details as narrated by poet Permānand in the Māmeru with all poetical embellishments. A rich father performs the ceremony in the fifth month of pregnancy but owing to one reason or other, this limit is more followed in the breach than in its observance. The husband has practically no voice in the matter and the first auspicious news is communicated by his parents to his parents-in-law to the effect that the daughter of the latter has come in the family way, and that all the necessary ceremonies in honour of the first-born child are required to be made. This event is celebrated by the parents of the husband and

those of the wife take only a subordinate interest in it. The upper garment is always rich as it is worn by the wife who puts on choice ornaments from the first month onward. If the parents of the wife happen to live in the same town or village, the family priest need not be sent to communicate the blessed news; but if they do so in the up-country, he is generally sent in person for this purpose; and yet the father of the husband gives him a letter which is calculated to impart the auspicious news in a formal manner and also to intimate the lucky day that comes to be fixed by local astrologers familiar with the horoscopes as well as family traditions of the husband and wife for celebrating the event. Optimistically enough, the child developing in the womb is happily conjectured by way of anticipation to be a male child, and all efforts are directed to see that the prospective saviour of the entire line at least seven degrees remote in the same blood, from the "Pum" Hell is born at the ripe moment safe and sound.

Both the families are required to contribute their mite towards inviting the blessed day by duly invoking the deity and doing other rites. If parents on either side show some slackness or deficiency in one way or other, the other side hurls jibes and rails at them. The parents of the wife with the nearest relations of the first degree at the most repair, as a rule, to the house of the husband, where all preparations on a grand scale for the adequate celebration are made.

Marriage :—PROFESSOR K. RANGACHARI, M. A., B. L., *Maharaja's Arts College, Vizianagaram.*

The purpose of the paper is mainly to discuss how far restrictions imposed on marriage between persons hold on account of Gotra and Pravara. The origins of Pravara and Gotra according to Hindu sages like Apastamba, As'valāyana, Baudhāyana, and Kātyāyana have been explained. Confusion in the ideas about Gotra and Pravara have been long in existence and this confusion is due to the contradictory declarations of the sages concerning them. Gotra did not always indicate the family of a person and briefly *Dvyāmusyāyana* Gotras are dealt with. Restrictions on marriage on account of Gotra and Pravara probably came into existence only during the Dharma *Sūtra* period, as they seem to be unknown earlier. How these restrictions fail in the case of Vais'yas particularly is explained.

Polyandry was an ancient practice known to the Aryans. Some Riks of the Rig Veda and *Purāṇic* traditions establish this fact. Prof. Macdonnel's statement that 'Polyandry is not Vedic,' examined.

Divorce and remarriage, though gone out of *Achāra*, were not only not unknown to the Aryans but were accepted by writers on Sacred Law. Manu, Narada, Parsas'ara and others are examined briefly.

Marriage in Vedic times, so far as it can be studied from the Vedic Literature, briefly dealt with.

Some Peculiar Features of the Konkani or Gaura Sarasvat Brahmans and Language:—By MR J. A. SALDANHA, B. A., L. L. B., M. L. C., *Madras.*

The *Gaura Sārasvat* Brahmans with their language Konkani occupy a dominant position in Goa and round about. Their language Konkani belongs to the Indo-European or Aryan family of languages—apparently a sister or twin-sister of *Marāthi* with certain interesting peculiarities which support the inference that it grew by the *superimposition* of the North-Indian *Gaura* Bengal variety on a local *Marāthi* dialect. It is interesting to note the peculiar vocalic mutation between *Marāthi*, Gujarati, Hindustani and Konkani. The *Gaura Sārasvats* wedged in among the *Drāviḍa* Brahmans of Western and Southern India differ from the latter by their exceedingly fair complexion, enterprising spirit, and a spirit of accommodation with changing times very much like the Parsis. They have adopted many a custom peculiar to Dravidian Brāhmans. They may eat fish and even certain meats (by no means, beef), to the extent allowed to *Gaud* Brāhmans of North-India, but show a tendency to become vegetarians according to the prevailing custom of Dravidian Brāhmans.

The ethnology of the *Gaud Sārasvats* and the philology of their language, so little studied, will repay the time labour spent by an oriental scholar.

New Light on Some Foreign Elements in Hindu Population :—By MR. R. SHASTRI, M. A., M. O. L., VEDANTA-TIRTHA, ETC., ETC., *Senior Professor of Sanskrit, Rajaram College, Kolhapur.*

In this paper the author has tried to show that, besides the *Sākadvīpī*, Khas'a, *Kāmbhoja* and some other *Brāhmaṇas*, as well as the *Jāts*, *Abhīrs* and some Ksatriya clans of Upper India, that are decidedly proved to be foreigners to that type of Aryan culture and civilization that developed in the *Madhyades'a*, and spread throughout India, there are lacs of other people in Northern India who can even to-day be recognised to have once belonged to (a) the Scythian and (b) old Persian lands. 'Kāyastha' is now a general name for all of them. The former are known as 'Sāthiās' or 'Sthiās' a traditional eye-physician caste and as many other 'Kaithiā' castes such as tailors, barbers, grain-friers, farmers, etc., who do not inter-marry or inter-dine with other Hindu sub-castes of their own professions and occupations. The *Purāṇas* and *Smṛitis* also call them 'Kāyasthas' as they themselves claim to be. This point is fully explained in notes to avoid the unnecessary length of the main body of the paper. The 'writer' *Kāyasthas*, who have nothing to do with the former, can be directly traced to have lived in the Persian provinces situated to the north-west of India as far as the lands of the Oxus and Jaxarates rivers, before they appear on the scene of Indian Social and Political History under that name or other description. These were not originally called *Kāyasthas* as

would appear from the absence of this name in Indian history and literature before the third century B. C. Evidences from Persian history and literature, from accounts of the Greek writers on India and from Sanskrit literature, corroborated by tradition and living facts, have been given in notes or the text wherever necessary. They trace the identity of that class with the second class *Brāhmanas* of Ancient Persia as far back as the reign of King Jamshid or Yama of Hindus, to whom the ancestors of the modern high class *Kāyasthas* are said to have been attached as ministers and writers in *Purāṇic* accounts and current tradition. The causes of their coming into India remain yet to be explained historically.

Scope of Anthropological Research in the Agency Division:—MR. R. SUBBA RAO.

Importance of the Study. Pages 1-2.

Brief History of the Agency Division. Page 3.

Anthropological Research in Agency, *Coya*.

Pages 3 (a)-6 (a).

Abundance of material, need for publication and society. Pages 6-7.

Yanadi. Page 7.

Engali. Page 8.

And other Agency tribes named.

Conclusion. Page 9.

Need for a University chair.

REVIEWS OF BOOKS.

The Races of Man and their Distribution. *By*
A. C. Haddon, M. A., Sc. D., F. R. S.—(Cambridge
University Press) 1924, pp. 184. 6 S.

Students and teachers of Anthropology will warmly welcome this enlarged and improved edition of Dr. Haddon's well-known book which first appeared several years ago as one of 'The XXth Century Science Series' at 1 s. per copy. The first edition consisted of two parts, the first dealing with some of the physical characters employed in racial classification, and the second giving a grouping of the main human stocks according to these characters, together with their geographical distribution in Oceania, Africa, Europe, Asia and America, and a brief account of some of the more interesting peoples of each of those areas. In the present edition two more parts are added, the third part dealing with the probable racial history of the various areas, and the fourth part giving a General Summary in which the learned author deals briefly with the problem of heredity and the effects of environment on the formation of races, and also gives a sketch of what he conceives to be the main lines of the progressive evolution and the early migrations of *Homo sapiens*. With regard to the problem of heredity and the effects of environment on the formation of races, Dr. Haddon tells us that there

is "good evidence that climatic conditions have indirectly become impressed on the germ-plasm so that definite responses have become heritable". "In any case, natural selection, or rather elimination, has always been at work and, combined with isolation areas, has produced stocks with certain associated characters, and it is to such stocks that the term 'races' can be applied". Certain groups of mankind exhibit so many intermediate characters that it is often very difficult to classify them. These may be due to racial mixture through long periods of time, or "they may be undifferentiated stocks, relics of early man, who have not acquired distinctive traits in areas of characterisation". As for the birth-place of *Homo sapiens*, Dr. Haddon is decidedly of opinion that it must have been "somewhere in Asia". The working hypothesis adopted by the learned author is that "after ne-anthropie man had definitely arisen, a division took place which resulted in one group, or groups, being located in a more or less tropical habitat, while the other group, or groups, were located in a temperate country. The great mountain axis of Asia, consisting of the Himalayas and their western continuations, seems to have formed the boundary between these two main areas of characterisation". Dr. Haddon is inclined to the opinion that "the actual evolution of man took place in Western Asia, possibly rather southerly than northerly, in which case the group, or groups, which remained to the south retained on the whole more primitive characters than the group or groups which migrated northerly". A final

conclusion is that the evolution of the existing "higher" groups has not taken place from existing or even ancient "lower" groups, but that these main groups, so far as they are pure stocks, have arisen independently from a common, unspecialised stock which Dr. Haddon assumes to have originated in far distant time in Western Asia. In the present state of our knowledge, Dr. Haddon's sketch of the main lines of the progressive evolution and the early migrations of *Homo sapiens* and the racial history of different countries would appear to give us a well-reasoned and the most probable view of the subject. All students of Anthropology will, I am sure, eagerly look forward to the publication of the larger work upon which, as our author informs us in the Preface, he is at present engaged and of which the book under review is to some extent a summary. We may be permitted to express our hope that Pre-historic Man and his relations with the existing races of man will receive a much fuller treatment in the larger work, and that in dealing with unsettled problems (such as the puzzling 'Kolarian' or 'Asur-Munda' problem) the learned author will not, as in the present book, merely set forth the different views held by different writers (who are not always named) but discuss them, and give his own views which are expected to be most illuminating.

Even as it is, the present little volume will form an invaluable addition to the library of the student of anthropology.

The Word of Lalla the Prophetess,—
Being the sayings of Lal Ded or Lal Diddi of Kashmir, Known also as Lalleshwari, Lalla Yogishwari & Lalishri, between 1300 & 1400 A. D. Done into English verse from the Lalla-Vakyian and annotated by Sir Richard Carnac Temple, Bt. Principal Editor of the Indian Antiquary. (Cambridge University Press, 1924.) PP. 292. Price 16 S. net.

This is a free translation in verse with explanatory notes of the sayings of Lalla Yogishwari, the prophetess, a female Shaiva Yogini of Kashmir who flourished about 1300—1400 A. D. As an immediate predecessor of the great mediæval Reformers of India,—Ramananda, Kabir and others,—her sayings are of great historical interest as voicing the ideas of the many contemporary thinkers and having had a strong influence on Popular Hinduism and fairly representing the Philosophy of Shaivism and the Yoga system as it then prevailed in Kashmir.

The author has, in the first few chapters, attempted to give a brief history of the evolution of religious faiths in India with a view to trace the sources of Lalla's religion, her theory and her doctrine. We might not agree with all that the author has said, but still it is a learned discourse, and difficult topics such as the origin of the doctrine of *Karma* and rebirth have been tackled in a scientific and logical manner.

The book, as the author has remarked, is meant for the ordinary reading public of England,

to whom the edition of Sir George Grierson and Dr. Barnett may not be easy reading. The translations together with the notes make the book one of absorbing interest and the author has laid the public under a debt of gratitude by publishing the book.

Kilimanjaro and Its People.—*By the Hon'ble Charles Dundas, O. B. E. (H. F. & G. Witherby, London) 1924. PP. 349. Price 18 S.*

Students will welcome this sociological study of an East African Bantu tribe—the Wachagga—and their present customs, laws and legends, written by an accomplished writer who as an administrator had special opportunities for researches into the past history and for an intimate and sympathetic study of the mentality and present habits, customs and institutions of the tribe. The book is nicely got up and illustrated.

In the opening chapter we have a vivid description of the highest mountain in Africa—the Kilimanjaro—on the fringe of which the Wachagga or Chagga people dwell, and the magnificence and impressive form of which “could not but have its influence on the impressionable nature of its primitive inhabitants and find a place in the unwritten volume of their legends”. The general form of the Kilimanjaro which has been built up from separate craters is that of one compact mountain mass rising from a level plain which lies from 500 to 4,000 feet above sea-level, and mounting in sweeping lines from a base of less

than 40 miles in diameter to an altitude of over 19,000 feet above sea-level. It has but two definite peaks, the great ice dome called Kibo, which is over 19,000 feet in altitude, and the jagged rock peak Mawenzi, which is over 17,000 feet high and is connected with Kibo by a gracefully curved saddle some five miles in length. Kibo is to the Chagga people a repository of mythical legends and is connected with their tribal customs and beliefs. The dead are buried with their feet turned towards Kibo; the side of the village facing Kibo is the honourable side, where the house master is buried and the villagers assemble for feasts and councils. He who comes from the direction of Kibo must give greeting first because he comes from the fortune-bringing side. Filial affection requires that a son should face Kibo whilst washing, lest it be said that he thrusts his father into the plain.

The love of country of the Chagga people is remarkable. Our author notes that the Chagga is more possessed of a sense of nationality than any other African known to him. "In truth", says Mr. Dundas, "one cannot but expect this, for not only is the magnificence of the mountain such as must compel attachment, but as soon as the mountain-dwellers leave it, life becomes intolerable for them". They dread the plain which affords them neither their accustomed food nor abundance of water, and where they are exposed to the burning heat and become victims of malaria, a prey for the ferocious lion, the blundering rhinoceros, the crafty buffalo, and the loathsome crocodile.

Although the Chagga people have been described as one tribe, they have originated from a succession of migrations of different tribes—even different races,—no less than eight different tribes and three racial stocks having contributed to the formation of the tribe. Having settled in communities whose limits were in the main naturally demarcated by the deep river valleys of the mountain, they call themselves as only the people of this or that ridge, as for instance Wamashame, Wamoshi, and so forth. A more or less common language has been evolved though with very distinct dialects. So also are the customs of this composite people in the main identical, but varying in detail.

The Chagga myths regarding kindly, helpful little folk who live in the mountain probably contain a reminiscence of the Wakonyingo, a dwarf people—perhaps pygmies—who inhabited the mountain before the Chagga people settled there.

In the second Chapter the author gives us a history of the Chagga people, which he divides into four periods, namely, 1, the Clan Period; 2, the Period of the Birth and Growth of Chiefship; 3, The Period of Paramount Chiefs; and 4, The European Period. Space forbids us to summarise this interesting tribal history, which represents “a forgotten stage of human history”. As our author tells us, although it is the history of an obscure people, “it is in the miniature much as the history of all mankind, a long tale of struggles, failures, tyrannies, sufferings and cruelty, but also achievements, progress, not devoid either of noble incidents, sacrifices and generosities”.

In the chapters that follow, the author gives us accounts of the Religion, Magic, Burial, Childhood and Youth, Matrimony, Occupations and Industries, Constitution and Law, Legends and Proverbs of the Chagga people. These chapters are written with a sympathetic insight and intimate acquaintance and are all full of interest. The book will form a very useful addition to the library of the student of anthropology.

A History of Magic and Experimental Science During the First Thirteen Centuries of our Era.—

By Lynn Thorndike, Ph. D.—In two volumes. (The Macmillan Company, New York) 1923. 42 S. net.

The professed object of these two bulky volumes is to present the reader with a culture history, namely, the history of magic including in the term all occult arts and sciences, superstitions and folklore and experimental science, and their relations to Christian thought during the first thirteen centuries of the Christian Era. The book undoubtedly bears evidence of vast erudition and great scholarship, untiring industry and patient research, but the form in which the result of the author's labours is presented appears to us to leave room for improvement. Prof. Thorndike has furnished the reader with an endless series of analytical summaries of treatises of representative writers of the period covered, but he leaves to the reader the difficult—if not impossible—task of tracing the changes of thought and the influences that determined those changes.

The author has examined and laid under contribution an enormous number of published books and unpublished manuscripts relating to his subject. Although India's contributions to the early development of 'Magic' and experimental science are not inconsiderable yet unfortunately the writings of Indian authors of the period do not appear to have been consulted and referred to. But Indians are mostly to blame for this, because most of such writings in Indian languages are not easily accessible to foreigners. We hope some Indian scholars will think fit to undertake the fascinating task of hunting up ancient and medieval Hindu and Mahomedan treatises on the subject, both in print and in manuscript, and prepare the history of Magic and early Experimental Science in India;—and surely such labour will not be ill spent. In spite of the defects noted above, the volumes under review are a monument of patient research into the ideas of magic and science prevalent in the late classical, early Christian and mediæval periods, and, as a pioneer work on the subject, will find a ready welcome in the libraries of some scholars and of many learned bodies.

Men and Thought in Ancient India :—*By Radhakumud Mukerji, M. A., Ph. D. (MacMillan & Co. London, 1924) PP. 192. Price 7 s. 6 d.*

This is a neatly bound small book of 192 pages consisting of five chapters in which the author has

attempted to give a panoramic view of ancient Indian culture and civilization. Beginning with Vedic India, he has selected the life of Rishi Yajnavalkya as representing that age and illustrating the Indian life of Vedic times—rather post-Vedic times—the educational and cultural conditions and opportunities of the country prevailing at that period. A few incidents of his life as found in the *Brihad Aranykupanishad* are described as illustrating the intellectual phase of Indian life of those times. The next figure selected is that of the Buddha—the great world-teacher—the scattered details of whose life and teachings are pieced together and briefly described, showing the influence he brought to bear upon Indian life and thought best illustrated by the life of the great Indian Emperor Asoka under whose reign India attained the high-water mark of material and moral greatness. It was an Empire resting on Right and not Might, while the next picture—that of Samudra Gupta—delineates the Kshatriya King bent upon systematic wars and conquests, who “made all parts of India acknowledge his paramount sovereignty by a victorious march through them”, not a ruthless annexationist but a “magnanimous conqueror, generous towards the fallen foe”, and who, as a reviver of the institution of the horse sacrifice of the Vedic age, achieved the status of an Emperor and, as a patron of arts and literature, has been identified with the legendary Vikramaditya of Yuan Chwang. The last portrait,—as being last in order of time,—is that of Harsha

Vardhana in whom we find a combination of Asoka and Samudra Gupta, who for a time stemmed the tide of disunion and made India a politically united country under his supreme authority and by his enlightened administration, patronage of learning, and large-hearted liberality and manifold works of public utility added much to her cultural greatness. The author has nicely put together the accounts collected from Bana's *Harshacharita* and the accounts of the Chinese travellers, and this small chapter is full of interesting information.

We recommend the book to the reading public especially to those who have not much time and leisure at their disposal to make any serious study of Indian history as this book will pre-eminently serve the purpose of satisfying their desire of knowing Ancient India in a nutshell. The serious student will also find this little book to be quite interesting.

The Dravidian Element in Indian Culture.—

By Gilbert Slater, M. A., D. Sc., with a Foreward by H. J. Flerue, D. Sc. (London: Ernest Benn Ltd.) 1924. Price 10 s. 6 d.

The volume before us is a notable contribution to the study of Indian cultural origins. Dr. Slater, starts with the now generally admitted theory that the main racial element in the Dravidian population is a branch of the Mediterranean or a closely allied race modified by the intermixture (in Southern India) of indigenous pre-Dravidian blood, who migrated into India through Mesopotamia at some

far distant date. Dr. Slater places this date prior to the dawn of the Sumerian civilisation, and, indeed even many centuries before the coming of the Stone Culture and suggests that some advance in the apparatus and methods of hunting was the cause of the Dravidian immigration into India. The characteristic Dravidian culture was however evolved in India and mainly under the stimulus of the Indian environment, though not without the operation of important external influences.

Between four and five thousand years ago Dravidian India received the seeds of many sorts of culture by sea from Egypt, or from Mesopotamia, or more probably from both, and received them into fertile soil. These became in India the starting-point of a new development, pushed forward by the native genius of the Dravidian race, and evolving in harmony with the Indian geographical environment. The author adduces some evidence which he considers sufficient to indicate that "there was in India at the time of the Aryan invasions a Dravidian civilization of a more elaborate and developed character than the civilization, if civilization it can be called, of the Aryans". The Dravidians, had cities, fortresses and wealth, and a distinct priest magician caste. In so far as this Dravidian civilization was derived from outside sources, its origin, says Dr. Slater, is to be traced to Egypt and Mesopotamia, linked up with India by sea-commerce. The first step towards the linking up of India with Egypt was accomplished when the Egyptians navigated the Red

Sea and reached the Land of Punt. "The bringers of the heliolithic culture from Egypt mingled their blood with the Dravidians, and the result, says Dr. Slater, was the Brahman caste".

The Aryan invasion, which came later, may, according to Dr. Slater, reasonably be regarded as one of the long series of exoduses of pastoral tribes from Asiatic steppes that have repeatedly devastated surrounding agricultural districts". "The Aryan descent into India was probably by the Khyber Pass, which gave entrance to the northern corner of the Punjab. The invaders probably found at first only thinly inhabited lands, on which they and their stock could increase and multiply. Later came the time of inter-racial conflict with Dravidians and pre-Dravidians which must have passed through three stages. The first, indicated by the Rig-Veda, was the stage of slaughter and devastation.....The second stage came with the realisation that it was more profitable to enslave than to kill; and then Aryan kingdoms were established, guarded by an Aryan soldiery, and sustained by the labours of Dravidian peasants and artisans. Thirdly came the stage depicted in the Epics, when Aryan kingdoms warred and made alliances indiscriminately with one another and with the Dravidian states surrounding them that still maintained their independence. During the second stage, and still more during the third, a mutual action and reaction was taking place. Intercourse included inter-marriage; it involved a struggle for survival between languages". The

Aryans brought little into India except their language. While the Dravidians became in time Aryanised in language, the Aryans on their part became Dravidised in culture. The caste system, the doctrines of rebirth and Karma, the Hindu pantheon and Indian magic all must, according to our author, be regarded as Dravidian rather than Aryan contributions to Indian culture, though affected in their development by the Aryan invasion. Space does not permit us to follow the learned author in further details of his theory and the arguments advanced in its support. Dr. Slater's theory may appear startling and even revolutionary to most Indian readers, but the theory and the arguments adduced in its support deserve the careful attention of the student. The impression that much of Indian or rather Hindu culture is not essentially "Aryan," but the indigenous product of Indian soil modified in important respects by contact and conflict with the immigrant Aryan culture, must have forced itself on the mind of most students of comparative Indian ethnology. Whether Dr. Slater has over-estimated the importance of the Dravidian element in Indian culture or not, the volume before us is well calculated to stimulate further study of this most interesting question.

Immigrants and Their Influence in the Lake Region of Central Africa.—By *John Roscoe, M. A.* (*University Press, Cambridge*). 1924. Price 2 s. net.

This book of 31 pages forms the second Frazer

Lecture in Social Anthropology delivered in 1923 in the University of Cambridge. The investigations of our author who has special knowledge of the Lake Region of Central Africa, lead him to think that there have been at least three distinct races in this region, each of which has left traces of its residence. The first and earliest traces are those of a highly intelligent people who erected high megaliths made of great boulders "so placed as to represent a giant figure, which was most probably intended to be worshipped", built buildings with stone enclosures, and made shafts from which ironstone was dug. The next inhabitants of whose existence we have evidence are a less intelligent people, namely, the negroes whose descendants are in the land at the present day and whose primitive customs are briefly described. They practise a rude agriculture. Among some of these tribes the men allow their clan brothers the use of their wives; and some fetch back the chief parts of the body of a dead relative and eat them during the days of mourning. The later invaders are all pastoral tribes (probably connected with the Galla tribes); they state that their forefathers came from the north or north-east.

The most conservative of them are the Banyankole who have retained the purest blood of all the tribes. This fact the author attributes to their religious customs and their belief in sympathetic magic in connection with milk and cattle-cutoms. Their social customs have now begun to break down under outside influence. Among these pasto-

ral tribes polyandry was quite common, owing to the inability of many to procure a sufficient, number of cows to pay the marriage fee and afterwards to supply the wife and family with milk as food. Vegetable diet was forbidden, for milk had to be kept apart in the stomach from any vegetable matter so as to avoid the danger of contaminating the milk and affecting the whole herd by sympathetic magic. The pastoral people, being of a better physical type and having greater moral courage than the ordinary negro, sooner or later made the agricultural people subservient and assumed lordship over them. After briefly stating the characteristic features of the culture of the agricultural and pastoral classes of the Lake Region, the author notes the influence of these pastoral invaders upon the original inhabitants, and the reflex influence upon themselves of contact with agricultural people, and shows how under certain circumstances pastoral women are now allowed to marry men from an agricultural tribe, other food came to be introduced by the pastoral tribes in place of a purely milk diet, their huts began to be improved and new totems were introduced, and how the agricultural tribes began to imitate their superiors in matters of marriage, and communistic idea about the wife become universal, property become common to the clan, death customs among the agricultural people were modified, for now they seldom cast out their dead nor eat them but bury them with marks of reverence.

Changes of religious ideas were also caused by the adaptation and interweaving of the religious opinions of the pastoral and agricultural people. With the fusion of the two classes came new rules for social life and a more settled form of government. In regard to marriage customs, polygyny has now become universal; and the rule that clan brothers have the right of access to each other's wives has now ceased, and each man now retains his wife or wives as his own property; but with regard to other property, clan-socialism holds good. The physical features have undergone a considerable change, and few people retain the distinctive Muhuma features. The nose is broader, the lips thicker, and the frame has broadened, while the height is slightly less than that of the pure pastoral tribes. In the position of the national gods a great change has come about, since four gods are singled out to meet the particular needs of the nation, the gods of Abundance, of War, of Plague, and of Rain. Each of the first three has his temple, which is kept in repair by the State. The most important temple in the land is the temple of a late king built during his life-time in which the jawbone of the departed king, ceremonially decorated, together with the stump of his umbilical cord, also decorated, was kept. The relics became the objects to which the ghost of the king attached itself; and a man who had been one of the king's constant attendants during life became the medium through

whom any communications with him might be made. No two kings might have their temples on the same hill, and no two tombs might be on the same hill. The king's successor had to build his capital on another side, but this might be near that of his predecessor where the temple stood. The book closes with the mention of the influence, mostly beneficent, of the Arab and the British upon the natives during the past few years. Old customs have broken down, and wherever this has happened, before anything of a better nature could take their place, vices have crept in, which are corrupting the natives. Though small in size, the book is a valuable contribution to African ethnology.

BOOKS FOR SALE.

at the "MAN IN INDIA" office,
Church Road, Ranchi.

1. Principles and Methods of Physical Anthropology, (Patna University Readership Lectures).

Price,—Five Rupees.

SOME OPINIONS.

Sir James Frazer, D. C. L., L. L. D., Litt. D., F. B. A., F. R. S., Professor of Social Anthropology in the University of Liverpool writes :—

.....I admire the range of your knowledge and intellectual interests, the sobriety and soundness of your judgment, and the lucidity and succinctness of your exposition. The book seems to me to deserve a wide circulation not only in India but wherever the English language is spoken, for so far as I am aware, * * there is no book on the same broad philosophical lines in English. Hitherto by your monographs on the Mundas and Oraons and your other writings you have proved yourself a first-rate field anthropologist, in your new book you have shown powers of higher quality and wider range. India is to be warmly congratulated on possessing in you an anthropologist of a very high order, and I am happy to know that the authorities have had the discernment to appoint you to the first teaching post of anthropology in the University of Patna. I could envy India your possession, for good anthropologists are too rare anywhere; but I am satisfied that for the advancement of our science you are far better situated in India than you would be in Europe, seeing that India includes such an immense diversity of races and of cultures, from low savagery up to high civilisation. * * *

Sir Arthur Keith, M. D., F. R. C. S., L. L. D., F. R. S. Conservator of the Museum and Hunterian Professor, Royal College of Surgeons of England, in *Nature* (London; April 1922):—

The Lectures form 'one of the best introductions into the study of anthropology in the English Language.

Dr. R. R. Marett, M. A., D. Sc., Reader in Anthropology in the University of Oxford, in *The London Mercury*, (June, 1921)—* * A most learned and lucid epitome of the methods and results of the study of man, prehistoric and present, considered on his physical side. * * *

Dr. A. C. Haddon, M. A., Sc. D., F. R. S., in *Folk-Lore* (London, Sept. 1921).—* * * The author is quite up-to-date in his reading.....The book gives an accurate epitomised survey of our present knowledge of the subject treated. Indian students are to be congratulated on having an instructor so learned, broad-minded and sane.

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.....I have read your book with care and find it a very learned and interesting contribution to our knowledge of the subject.....

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SOME OPINIONS.

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* * * It is a most valuable contribution to Indian Ethnography.

THE SPECTATOR (London) :—Anthropologists will welcome this careful account of the Mundas : The first part of the book is occupied with a history of the tribe and an attempt at solving the difficult problems that surround its origins. But possibly its most interesting section is the Ethnographical one, in which the tribal customs are described in detail.

The REVIEW OF REVIEWS (London, September, 1912), under the heading 'Notable Books of the Month,' writes :—

Mr. Chandra Roy is intensely interested in the task he has set himself. * * The history, accurate and legendary, and ethnography of this interesting people are given in great detail by Mr. Roy. * * *

The STATESMAN (Calcutta, Aug. 7, 1912) writes :—

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The ENGLISHMAN (Calcutta, July 22, 1912) writes :—

The book before us is, we believe, the first attempt to put together a connected history of this interesting people. Mr. E. A. GAIT, I. C. S., the Census Commissioner, himself an acknowledged authority on Indian Ethnology, has written a learned introduction to the book, of which he expresses a very high opinion. * *

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The HINDUSTHAN REVIEW (Allahabad, July, 1912) writes :—

The work under notice is an instructive sketch of the people, historical, descriptive, ethnological, sociological.

It is a mine of valuable information on all matters relating to the Mundas. It is a valuable contribution to such sciences as Ethnography and Sociology. The style is very pleasant. Altogether Mr. Roy's book is of absorbing interest.

The MODERN REVIEW (Calcutta, June, 1912) writes :—

This neatly printed and well-bound book is a storehouse of information regarding the Mundas and the Country they inhabit. The author has looked up carefully all available records and has executed his self-imposed task with scholarly ability. It is a pity that such a capable man as the author is, could not devote his whole time to the work of ethnological research in India, for which there is a pressing need in this country. Mr. Gait, who is, now undoubtedly a great authority on the subject of Indian Ethnology, has written an introduction for the book which is by itself an interesting and instructive study.

The INDIAN WORLD (Calcutta, September 22, 1912) writes :—

The author has collected, collated and systematised the vast materials at his disposal with a care and devotion that must be the ambition of all students of history. His insight into the true life and spirit of the people is not born of dilettante interest but of close acquaintance with their manners and customs. The chapter on the Ethnography of the Mundas is worth its weight in gold.....In a word, the book is an invaluable contribution to the Ethnological literature of India.

Also highly spoken of by such papers as the *ATHENÆUM* (Aug. 10, 1912), the *ANTHROPOS* (Jany. Feby., 1913), and the *CATHOLIC HERALD* (June, 1912).

3 The Oraons of Chota Nagpur.

With numerous illustrations, and an Introduction by DR. A. C. HADDON, M. A., SC. D., F. R. S.

Price—Eight Rupees.

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The book is full of very valuable and interesting information. I cordially congratulate you on your success in collecting so much anthropological information concerning the tribe, and on the admirable lucidity and terseness with which you set forth the facts carefully distinguishing them from inferences which you have drawn from them. The inferences seem to me for the most part just and probable.

Your work on the Oraons promises to rank with the very best monographs on Indian tribes.

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